

pointer:0x7f5ee84ef010  
SgSourceFile

root node

SgNode\* p\_parent : 0x15c2940  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x15dfee8  
SgStringList p\_originalCommandLineArgumentList : [pdfGenerator, -rose:Cxx11\_only, test2.cpp]  
int p\_verbose : 0  
bool p\_output\_warnings : 0  
bool p\_C\_only : 0  
bool p\_UPC\_only : 0  
bool p\_UPCxx\_only : 0  
int p\_upc\_threads : 0  
bool p\_C89\_only : 0  
bool p\_C89\_gnu\_only : 0  
bool p\_C99\_only : 0  
bool p\_C99\_gnu\_only : 0  
bool p\_Cxx\_only : 1  
bool p\_C11\_only : 0  
bool p\_C11\_gnu\_only : 0  
bool p\_Cxx0x\_only : 0  
bool p\_Cxx11\_only : 1  
bool p\_Cxx11\_gnu\_only : 1  
bool p\_C14\_only : 0  
bool p\_C14\_gnu\_only : 0  
bool p\_Cxx14\_only : 0  
bool p\_Cxx14\_gnu\_only : 0  
bool p\_Fortran\_only : 0  
bool p\_F77\_only : 0  
bool p\_F90\_only : 0  
bool p\_F95\_only : 0  
bool p\_F2003\_only : 0  
bool p\_F2008\_only : 0  
bool p\_CoArrayFortran\_only : 0  
bool p\_Java\_only : 0  
bool p\_X10\_only : 0  
bool p\_PHP\_only : 0  
bool p\_Python\_only : 0  
bool p\_Cuda\_only : 0  
bool p\_OpenCL\_only : 0  
bool p\_requires\_C\_preprocessor : 0  
bool p\_binary\_only : 0  
SgFile::outputFormatOption\_enum p\_inputFormat : 2  
SgFile::outputFormatOption\_enum p\_outputFormat : 2  
SgFile::outputFormatOption\_enum p\_backendCompileFormat : 2  
bool p\_fortran\_implicit\_none : 0  
bool p\_openmp : 0  
bool p\_openmp\_parse\_only : 1  
bool p\_openmp\_ast\_only : 0  
bool p\_openmp\_lowering : 0  
bool p\_cray\_pointer\_support : 0  
bool p\_failsafe : 0  
bool p\_output\_parser\_actions : 0  
bool p\_exit\_after\_parser : 0  
bool p\_skip\_syntax\_check : 0  
bool p\_relax\_syntax\_check : 0  
bool p\_skip\_translation\_from\_edg\_ast\_to\_rose\_ast : 0  
bool p\_skip\_transformation : 0  
bool p\_skip\_unparse : 0  
bool p\_skipfinalCompileStep : 0  
bool p\_unparse\_includes : 0  
bool p\_unparse\_line\_directives : 0  
bool p\_unparse\_function\_calls\_using\_operator\_syntax : 0

pointer:0x7f5ee8565120  
SgGlobal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ee84ef010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x15dff40  
Sg\_File\_Info\* p\_endOfConstruct : 0x15dff98  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8695140  
SgTypeTable\* p\_type\_table : 0x15f5748  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgDeclarationStatementPtrList p\_declarations : <too long>: <too long>: [0x7f5ede897010, 0x7f5ede8973d8, 0x7f5ede8977a0, 0x7f5ede897...

pointer:0x7f5ede32c010  
SgNamespaceDeclarationStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 6:1  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: RAJA

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SgNode\* p\_parent : 0x7f5ee8565120  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4a6e0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4a738  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0x1965ae0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 1  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede32c010  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : RAJA  
SgNamespaceDefinitionStatement\* p\_definition : 0x7f5ede3c5010  
bool p\_isUnnamedNamespace : 0  
bool p\_isInlinedNamespace : 0

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pointer:0x7f5ede7b12b0  
SgTypedefDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 8:3  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L63R

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SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4a790  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4a7e8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede7b12b0  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : Index\_type  
SgType\* p\_base\_type : 0x1ab2e60  
SgTypedefType\* p\_type : 0x7f5ede77e498  
SgDeclarationStatement\* p\_declaration : 0  
SgSymbol\* p\_parent\_scope : 0x1ea39c0  
bool p\_typedefBaseTypeContainsDefiningDeclaration : 0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
bool p\_requiresGlobalNameQualificationOnType : 0  
int p\_name\_qualification\_length\_for\_base\_type : 0  
bool p\_type\_elaboration\_required\_for\_base\_type : 0  
bool p\_global\_qualification\_required\_for\_base\_type : 0  
bool p\_isAutonomousDeclaration : 1  
bool p\_isAssociatedWithDeclarationList : 0  
bool p\_isFirstDeclarationOfDeclarationList : 1

pointer:0x7f5ede69b310  
SgClassDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 11:3  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: RAJA\_\_scope\_\_omp\_parallel\_for\_exec

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SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4a9a0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4a9f8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0x1965b00  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede69b310  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede69b070  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : omp\_parallel\_for\_exec  
SgClassDeclaration::class\_types p\_class\_type : 1  
SgClassType\* p\_type : 0x1cc90e0  
SgClassDefinition\* p\_definition : 0x7f5ede649020  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_from\_template : 0  
bool p\_fixupScope : 0  
bool p\_isUnNamed : 0  
bool p\_explicit\_annotation\_interface : 0  
bool p\_explicit\_interface : 0  
bool p\_explicit\_enum : 0  
bool p\_explicit\_anonymous : 0  
SgExprListExp\* p\_decoratorList : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_isAutonomousDeclaration : 1  
bool p\_isRepresentingTemplateParameterInTemplateDeclaration : 0

pointer:0x7f5ede649020  
SgClassDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 11:3  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede69b310  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4a948  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4a8f0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8697ad0  
SgTypeTable\* p\_type\_table : 0x15f5cc0  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgDeclarationStatementPtrList p\_members : []  
SgBaseClassPtrList p\_inheritances : []  
unsigned int p\_packingAlignment : 0  
bool p\_isSequence : 0  
bool p\_isPrivate : 0  
bool p\_isAbstract : 0

pointer:0x7f5ede69b850  
SgClassDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 12:3  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: RAJA\_\_scope\_\_omp\_for\_nowait\_exec

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SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4abb0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4ac08  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede69b850  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede69b5b0  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : omp\_for\_nowait\_exec  
SgClassDeclaration::class\_types p\_class\_type : 1  
SgClassType\* p\_type : 0x1cc9160  
SgClassDefinition\* p\_definition : 0x7f5ede649150  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_from\_template : 0  
bool p\_fixupScope : 0  
bool p\_isUnNamed : 0  
bool p\_explicit\_annotation\_interface : 0  
bool p\_explicit\_interface : 0  
bool p\_explicit\_enum : 0  
bool p\_explicit\_anonymous : 0  
SgExprListExp\* p\_decoratorList : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_isAutonomousDeclaration : 1  
bool p\_isRepresentingTemplateParameterInTemplateDeclaration : 0



pointer:0x7f5ede649150  
SgClassDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 12:3  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede69b850  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4ab58  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4ab00  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8697c00  
SgTypeTable\* p\_type\_table : 0x15f5ce8  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgDeclarationStatementPtrList p\_members : []  
SgBaseClassPtrList p\_inheritances : []  
unsigned int p\_packingAlignment : 0  
bool p\_isSequence : 0  
bool p\_isPrivate : 0  
bool p\_isAbstract : 0

pointer:0x7f5ede69bd90  
SgClassDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 13:3  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: RAJA\_\_scope\_\_omp\_parallel\_for\_segit

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SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4adc0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4ae18  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede69bd90  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede69baf0  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : omp\_parallel\_for\_segit  
SgClassDeclaration::class\_types p\_class\_type : 1  
SgClassType\* p\_type : 0x1cc91e0  
SgClassDefinition\* p\_definition : 0x7f5ede649280  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_from\_template : 0  
bool p\_fixupScope : 0  
bool p\_isUnNamed : 0  
bool p\_explicit\_annotation\_interface : 0  
bool p\_explicit\_interface : 0  
bool p\_explicit\_enum : 0  
bool p\_explicit\_anonymous : 0  
SgExprListExp\* p\_decoratorList : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_isAutonomousDeclaration : 1  
bool p\_isRepresentingTemplateParameterInTemplateDeclaration : 0

pointer:0x7f5ede649280  
SgClassDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 13:3  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede69bd90  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4ad68  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4ad10  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8697d30  
SgTypeTable\* p\_type\_table : 0x15f5d10  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgDeclarationStatementPtrList p\_members : []  
SgBaseClassPtrList p\_inheritances : []  
unsigned int p\_packingAlignment : 0  
bool p\_isSequence : 0  
bool p\_isPrivate : 0  
bool p\_isAbstract : 0

pointer:0x7f5ede69c2d0  
SgClassDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 14:3  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: RAJA\_\_scope\_\_omp\_parallel\_segit

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SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4afd0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4b028  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede69c2d0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede69c030  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : omp\_parallel\_segit  
SgClassDeclaration::class\_types p\_class\_type : 1  
SgClassType\* p\_type : 0x1cc9260  
SgClassDefinition\* p\_definition : 0x7f5ede6493b0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_from\_template : 0  
bool p\_fixupScope : 0  
bool p\_isUnNamed : 0  
bool p\_explicit\_annotation\_interface : 0  
bool p\_explicit\_interface : 0  
bool p\_explicit\_enum : 0  
bool p\_explicit\_anonymous : 0  
SgExprListExp\* p\_decoratorList : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_isAutonomousDeclaration : 1  
bool p\_isRepresentingTemplateParameterInTemplateDeclaration : 0

pointer:0x7f5ede6493b0  
SgClassDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 14:3  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede69c2d0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4af78  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4af20  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8697e60  
SgTypeTable\* p\_type\_table : 0x15f5d38  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgDeclarationStatementPtrList p\_members : []  
SgBaseClassPtrList p\_inheritances : []  
unsigned int p\_packingAlignment : 0  
bool p\_isSequence : 0  
bool p\_isPrivate : 0  
bool p\_isAbstract : 0

pointer:0x7f5ede69c810  
SgClassDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 15:3  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: RAJA\_\_scope\_\_omp\_taskgraph\_segit

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SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4b1e0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4b238  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede69c810  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede69c570  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : omp\_taskgraph\_segit  
SgClassDeclaration::class\_types p\_class\_type : 1  
SgClassType\* p\_type : 0x1cc92e0  
SgClassDefinition\* p\_definition : 0x7f5ede6494e0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_from\_template : 0  
bool p\_fixupScope : 0  
bool p\_isUnNamed : 0  
bool p\_explicit\_annotation\_interface : 0  
bool p\_explicit\_interface : 0  
bool p\_explicit\_enum : 0  
bool p\_explicit\_anonymous : 0  
SgExprListExp\* p\_decoratorList : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_isAutonomousDeclaration : 1  
bool p\_isRepresentingTemplateParameterInTemplateDeclaration : 0

pointer:0x7f5ede6494e0  
SgClassDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 15:3  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede69c810  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4b188  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4b130  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8697f90  
SgTypeTable\* p\_type\_table : 0x15f5d60  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgDeclarationStatementPtrList p\_members : []  
SgBaseClassPtrList p\_inheritances : []  
unsigned int p\_packingAlignment : 0  
bool p\_isSequence : 0  
bool p\_isPrivate : 0  
bool p\_isAbstract : 0

pointer:0x7f5ede69cd50  
SgClassDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 16:3  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L60R

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4b3f0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4b448  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede69cd50  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede69cab0  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : omp\_taskgraph\_interval\_segit  
SgClassDeclaration::class\_types p\_class\_type : 1  
SgClassType\* p\_type : 0x1cc9360  
SgClassDefinition\* p\_definition : 0x7f5ede649610  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_from\_template : 0  
bool p\_fixupScope : 0  
bool p\_isUnNamed : 0  
bool p\_explicit\_annotation\_interface : 0  
bool p\_explicit\_interface : 0  
bool p\_explicit\_enum : 0  
bool p\_explicit\_anonymous : 0  
SgExprListExp\* p\_decoratorList : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_isAutonomousDeclaration : 1  
bool p\_isRepresentingTemplateParameterInTemplateDeclaration : 0



pointer:0x7f5ede649610  
SgClassDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 16:3  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede69cd50  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4b398  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4b340  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee86980c0  
SgTypeTable\* p\_type\_table : 0x15f5d88  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgDeclarationStatementPtrList p\_members : []  
SgBaseClassPtrList p\_inheritances : []  
unsigned int p\_packingAlignment : 0  
bool p\_isSequence : 0  
bool p\_isPrivate : 0  
bool p\_isAbstract : 0

pointer:0x7f5ede69d290  
SgClassDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 17:3  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: RAJA\_\_scope\_\_omp\_reduce

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SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4b600  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4b658  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede69d290  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede69cff0  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : omp\_reduce  
SgClassDeclaration::class\_types p\_class\_type : 1  
SgClassType\* p\_type : 0x1cc93e0  
SgClassDefinition\* p\_definition : 0x7f5ede649740  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_from\_template : 0  
bool p\_fixupScope : 0  
bool p\_isUnNamed : 0  
bool p\_explicit\_annotation\_interface : 0  
bool p\_explicit\_interface : 0  
bool p\_explicit\_enum : 0  
bool p\_explicit\_anonymous : 0  
SgExprListExp\* p\_decoratorList : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_isAutonomousDeclaration : 1  
bool p\_isRepresentingTemplateParameterInTemplateDeclaration : 0

pointer:0x7f5ede649740  
SgClassDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 17:3  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede69d290  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4b5a8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4b550  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee86981f0  
SgTypeTable\* p\_type\_table : 0x15f5db0  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgDeclarationStatementPtrList p\_members : []  
SgBaseClassPtrList p\_inheritances : []  
unsigned int p\_packingAlignment : 0  
bool p\_isSequence : 0  
bool p\_isPrivate : 0  
bool p\_isAbstract : 0

pointer:0x7f5ede29f010  
SgPragmaDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 21:1  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: pragma\_statement

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SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4b760  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4b7b8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0x16e9ff0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede29f010  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede29f010  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgPragma\* p\_pragma : 0x1ec1470

pointer:0x1ec1470  
SgPragma

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SgNode\* p\_parent : 0x7f5ede29f010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
std::string p\_name : xgen specialize\_template  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4b4f8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4b4a0  
short p\_printed : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0

pointer:0x7f5ede173438  
SgTemplateFunctionDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 25:14  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L64R\_\_L65R

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SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4b810  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4b868  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0x16ea010  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede173438  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede173010  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : forall  
SgFunctionParameterList\* p\_parameterList : 0x7f5edea4b630  
SgFunctionModifier p\_functionModifier : <too long>: <too long>: SgFunctionModifier(isUnknown() = false isDefault() = true isInline()  
SgSpecialFunctionModifier p\_specialFunctionModifier : <too long>: <too long>: SgSpecialFunctionModifier(isUnknown() = false isDefault()  
SgTypePtrList p\_exceptionSpecification : []  
bool p\_named\_in\_end\_statement : 0  
std::string p\_asm\_name :  
SgExprListExp\* p\_decoratorList : 0  
SgFunctionType\* p\_type : 0x7f5ede9898f0  
SgFunctionDefinition\* p\_definition : 0x7f5ede128010  
bool p\_oldStyleDefinition : 0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresNameQualificationOnReturnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
SgDeclarationStatement::gnu\_extension\_visability\_attribute\_enum p\_gnu\_extension\_visability : 1  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
int p\_name\_qualification\_length\_for\_return\_type : 0  
bool p\_type\_elaboration\_required\_for\_return\_type : 0  
bool p\_global\_qualification\_required\_for\_return\_type : 0  
bool p\_prototypelsWithoutParameters : 0  
int p\_gnu\_regparm\_attribute : -1  
SgFunctionType\* p\_type\_syntax : 0  
bool p\_type\_syntax\_is\_available : 0  
bool p\_using\_C11\_Noreturn\_keyword : 0  
bool p\_is\_constexpr : 0  
bool p\_using\_new\_function\_return\_type\_syntax : 0  
SgFunctionParameterScope\* p\_functionParameterScope : 0  
SgTemplateParameterPtrList p\_templateParameters : [0x1ed30a0, 0x1ed3100]  
SgTemplateArgumentPtrList p\_templateSpecializationArguments : []  
SgName p\_string : <too long>: <too long>: template < typename EXEC\_POLICY\_T, typename LOOP\_BODY >  
bool p\_string\_represents\_function\_body : 0

pointer:0x7f5edea4b630  
SgFunctionParameterList  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 25:14  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L65R

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SgNode\* p\_parent : 0x7f5ede173438  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4bfa0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4bff8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edea4b630  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgInitializedNamePtrList p\_args : [0x7f5ede41b5f8, 0x7f5ede41b740, 0x7f5ede41b888]

pointer:0x7f5ede41b5f8  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 25:37  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4b630  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4bc30  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4bc88  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : begin  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede173438  
SgStorageModifier\* p\_storageModifier : 0x1e5c318  
SgScopeStatement\* p\_scope : 0x7f5ede128010  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0



pointer:0x7f5ede41b740  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 25:55  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4b630  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4bce0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4bd38  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : end  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede173438  
SgStorageModifier\* p\_storageModifier : 0x1e5c340  
SgScopeStatement\* p\_scope : 0x7f5ede128010  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41b888  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 26:28  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4b630  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4bd90  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4bde8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : loop\_body  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede2770b0  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede173438  
SgStorageModifier\* p\_storageModifier : 0x1e5c368  
SgScopeStatement\* p\_scope : 0x7f5ede128010  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede128010  
SgTemplateFunctionDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 27:14  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede173438  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4be40  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4be98  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8698450  
SgTypeTable\* p\_type\_table : 0x15f5e00  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgBasicBlock\* p\_body : 0x7f5ede4ae240  
std::map<SgNode\*,int> p\_scope\_number\_list : []

pointer:0x7f5ede4ae240  
SgBasicBlock  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 27:14  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede128010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4bb80  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4bbd8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8698320  
SgTypeTable\* p\_type\_table : 0x15f5dd8  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1f456b0]  
std::string p\_asm\_function\_body :

pointer:0x1f456b0  
SgExprStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 28:16  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4ae240  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4c890  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4c8e8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1d85b70

pointer:0x1d85b70  
SgFunctionCallExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 28:22  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void

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SgNode\* p\_parent : 0x1f456b0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4c7e0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4c838  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4c578  
SgExpression\* p\_function : 0x1f0eb90  
SgExprListExp\* p\_args : 0x1d6c578  
SgType\* p\_expression\_type : 0x7f5ede9898f0  
bool p\_uses\_operator\_syntax : 0

pointer:0x1f0eb90  
SgTemplateFunctionRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 28:16  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void(::RAJA::Index\_type, ::RAJA::Index\_type, LOOP\_BODY )

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d85b70  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4c0a8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4c100  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4bef0  
SgTemplateFunctionSymbol\* p\_symbol\_i : 0x1f02870  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6c578  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

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SgNode\* p\_parent : 0x1d85b70  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4c6d8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4c730  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4c470  
SgExpressionPtrList p\_expressions : [0x1f262a0, 0x1d52ec0, 0x1d52f28, 0x1d52f90]



pointer:0x1f262a0  
SgConstructorInitializer  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 28:24  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: EXEC\_POLICY\_T

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SgNode\* p\_parent : 0x1d6c578  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4bf48  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4c2b8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4c1b0  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgMemberFunctionDeclaration\* p\_declaration : 0  
SgExprListExp\* p\_args : 0x1d6c510  
SgType\* p\_expression\_type : 0x7f5ede277010  
bool p\_need\_name : 1  
bool p\_need\_qualifier : 0  
bool p\_need\_parenthesis\_after\_name : 1  
bool p\_associated\_class\_unknown : 1  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6c510  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

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SgNode\* p\_parent : 0x1f262a0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4c158  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4c050  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4c208  
SgExpressionPtrList p\_expressions : []

pointer:0x1d52ec0  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 29:20  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1d6c578  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4c3c0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4c418  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4c260  
SgVariableSymbol\* p\_symbol : 0x18411d0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d52f28  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 29:27  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1d6c578  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4c4c8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4c520  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4c310  
SgVariableSymbol\* p\_symbol : 0x1841200  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d52f90  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 30:20  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: LOOP\_BODY

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SgNode\* p\_parent : 0x1d6c578  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4c5d0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4c628  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4c368  
SgVariableSymbol\* p\_symbol : 0x1841230  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x7f5ede173c88  
SgTemplateFunctionDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 36:5  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L66R\_\_L67R

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4c998  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4c940  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0x17d5160  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede173c88  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede173860  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : forall  
SgFunctionParameterList\* p\_parameterList : 0x7f5edea4bad0  
SgFunctionModifier p\_functionModifier : <too long>: <too long>: SgFunctionModifier(isUnknown() = false isDefault() = true isInline()  
SgSpecialFunctionModifier p\_specialFunctionModifier : <too long>: <too long>: SgSpecialFunctionModifier(isUnknown() = false isDefault()  
SgTypePtrList p\_exceptionSpecification : []  
bool p\_named\_in\_end\_statement : 0  
std::string p\_asm\_name :  
SgExprListExp\* p\_decoratorList : 0  
SgFunctionType\* p\_type : 0x7f5ede989980  
SgFunctionDefinition\* p\_definition : 0x7f5ede128140  
bool p\_oldStyleDefinition : 0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresNameQualificationOnReturnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
SgDeclarationStatement::gnu\_extension\_visability\_attribute\_enum p\_gnu\_extension\_visability : 1  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
int p\_name\_qualification\_length\_for\_return\_type : 0  
bool p\_type\_elaboration\_required\_for\_return\_type : 0  
bool p\_global\_qualification\_required\_for\_return\_type : 0  
bool p\_prototypelsWithoutParameters : 0  
int p\_gnu\_regparm\_attribute : -1  
SgFunctionType\* p\_type\_syntax : 0  
bool p\_type\_syntax\_is\_available : 0  
bool p\_using\_C11\_Noreturn\_keyword : 0  
bool p\_is\_constexpr : 0  
bool p\_using\_new\_function\_return\_type\_syntax : 0  
SgFunctionParameterScope\* p\_functionParameterScope : 0  
SgTemplateParameterPtrList p\_templateParameters : [0x1ed3160]  
SgTemplateArgumentPtrList p\_templateSpecializationArguments : []  
SgName p\_string : <too long>: <too long>: template < typename LOOP\_BODY > inline \_\_attribute\_\_ ( ( always\_  
bool p\_string\_represents\_function\_body : 0

pointer:0x7f5edea4bad0  
SgFunctionParameterList  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 36:5  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L67R

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SgNode\* p\_parent : 0x7f5ede173c88  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4d230  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4d288  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edea4bad0  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgInitializedNamePtrList p\_args : [0x7f5ede41bef0, 0x7f5ede41c038, 0x7f5ede41c180, 0x7f5ede41c2c8]

pointer:0x7f5ede41bef0  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 37:17  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4bad0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4ce10  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4ce68  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name :  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1cc90e0  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede173c88  
SgStorageModifier\* p\_storageModifier : 0x1e5c430  
SgScopeStatement\* p\_scope : 0x7f5ede128140  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visibility\_enum p\_gnu\_attribute\_visibility : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0



pointer:0x7f5ede41c038  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 38:20  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4bad0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4cec0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4cf18  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : begin  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede173c88  
SgStorageModifier\* p\_storageModifier : 0x1e5c458  
SgScopeStatement\* p\_scope : 0x7f5ede128140  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visibility\_enum p\_gnu\_attribute\_visibility : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41c180  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 38:38  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4bad0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4cf70  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4cfc8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : end  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede173c88  
SgStorageModifier\* p\_storageModifier : 0x1e5c480  
SgScopeStatement\* p\_scope : 0x7f5ede128140  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41c2c8  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 39:19  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4bad0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4d020  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4d078  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : loop\_body  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede277150  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede173c88  
SgStorageModifier\* p\_storageModifier : 0x1e5c4a8  
SgScopeStatement\* p\_scope : 0x7f5ede128140  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede128140  
SgTemplateFunctionDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 40:5  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede173c88  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4d0d0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4d128  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee86986b0  
SgTypeTable\* p\_type\_table : 0x15f5e50  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgBasicBlock\* p\_body : 0x7f5ede4ae358  
std::map<SgNode\*,int> p\_scope\_number\_list : []

pointer:0x7f5ede4ae358  
SgBasicBlock  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 40:5  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede128140  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4cd60  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4cdb8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8698580  
SgTypeTable\* p\_type\_table : 0x15f5e28  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1f45710, 0x7f5ede0df010, 0x1f45830]  
std::string p\_asm\_function\_body :

pointer:0x1f45710  
SgExprStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 41:7  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4ae358  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4d3e8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4d440  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1e8f2b0

pointer:0x1e8f2b0  
SgNullExpression  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

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SgNode\* p\_parent : 0x1f45710  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4d338  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4d390  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4d180

pointer:0x7f5ede0df010  
SgForStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:7  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4ae358  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4e4c0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4e518  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee86987e0  
SgTypeTable\* p\_type\_table : 0x15f5e78  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgForInitStatement\* p\_for\_init\_stmt : 0x1f5dfd0  
SgStatement\* p\_test : 0x1f45770  
SgExpression\* p\_increment : 0x1fae640  
SgStatement\* p\_loop\_body : 0x7f5ede4ae470  
SgStatement\* p\_else\_body : 0  
std::string p\_string\_label :



pointer:0x1f5dfd0  
SgForInitStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:13  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede0df010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4d8b8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4d910  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgStatementPtrList p\_init\_stmt : [0x7f5ede590420]

pointer:0x7f5ede590420  
SgVariableDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:13  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: \_variable\_declaration\_\_variable\_type\_L63R\_variable\_name\_L66R\_\_L67R\_\_scope\_\_\_\_\_SgSS2\_\_\_\_\_scope\_\_\_\_\_

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SgNode\* p\_parent : 0x1f5dfd0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4d5f8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4d650  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 1  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede590420  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgDeclarationStatement\* p\_baseTypeDefiningDeclaration : 0  
SgInitializedNamePtrList p\_variables : [0x7f5ede41c410]  
bool p\_variableDeclarationContainsBaseTypeDefiningDeclaration : 0  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresGlobalNameQualificationOnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
unsigned short p\_gnu\_extension\_initialization\_priority : 0  
SgDeclarationStatement::gnu\_extension\_visibility\_attribute\_enum p\_gnu\_extension\_visibility : 0  
SgVariableDeclaration::gnu\_extension\_declaration\_attributes\_enum p\_gnu\_extension\_declaration\_attribute : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_isAssociatedWithDeclarationList : 0  
bool p\_isFirstDeclarationOfDeclarationList : 1  
bool p\_is\_thread\_local : 0  
bool p\_is\_constexpr : 0

pointer:0x7f5ede41c410  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:13  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede590420  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4d5a0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4d548  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : ii  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0x1f79a40  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede4ffb18  
SgStorageModifier\* p\_storageModifier : 0x1e5c4d0  
SgScopeStatement\* p\_scope : 0x7f5ede0df010  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visibility\_enum p\_gnu\_attribute\_visibility : 2  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x1f79a40  
SgAssignInitializer  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x7f5ede41c410  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4d808  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4d7b0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4d4f0  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgExpression\* p\_operand\_i : 0x1d52ff8  
SgType\* p\_expression\_type : 0

pointer:0x1d52ff8  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:29  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1f79a40  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4d700  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4d758  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4d498  
SgVariableSymbol\* p\_symbol : 0x1841290  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1f45770  
SgExprStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:37  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede0df010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4dc80  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4dcd8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1f930b0

pointer:0x1f930b0  
SgLessThanOp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:40  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: bool

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SgNode\* p\_parent : 0x1f45770  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4dbd0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4dc28  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4d968  
SgExpression\* p\_lhs\_operand\_i : 0x1d53060  
SgExpression\* p\_rhs\_operand\_i : 0x1d530c8  
SgType\* p\_expression\_type : 0  
SgExpression\* p\_originalExpressionTree : 0

pointer:0x1d53060  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:37  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1f930b0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4d9c0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4da18  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4d860  
SgVariableSymbol\* p\_symbol : 0x1841320  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0



pointer:0x1d530c8  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:42  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1f930b0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4dac8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4db20  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4d6a8  
SgVariableSymbol\* p\_symbol : 0x18412c0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1fae640  
SgPlusPlusOp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:48  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x7f5ede0df010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4de90  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4dee8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4da70  
SgExpression\* p\_operand\_i : 0x1d53130  
SgType\* p\_expression\_type : 0  
SgUnaryOp::Sgop\_mode p\_mode : 0

pointer:0x1d53130  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:50  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1fae640  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4dd88  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4dde0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 1  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4db78  
SgVariableSymbol\* p\_symbol : 0x1841320  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x7f5ede4ae470  
SgBasicBlock  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:55  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede0df010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4df40  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4df98  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8698910  
SgTypeTable\* p\_type\_table : 0x15f5ea0  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1f457d0]  
std::string p\_asm\_function\_body :

pointer:0x1f457d0  
SgExprStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 44:9  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4ae470  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4e410  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4e468  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1d85be0

pointer:0x1d85be0  
SgFunctionCallExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 44:18  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: UNKNOWN

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SgNode\* p\_parent : 0x1f457d0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4e360  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4e3b8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4e0f8  
SgExpression\* p\_function : 0x1d53198  
SgExprListExp\* p\_args : 0x1d6c5e0  
SgType\* p\_expression\_type : 0x7f5ede277150  
bool p\_uses\_operator\_syntax : 0

pointer:0x1d53198  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 44:9  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: LOOP\_BODY

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SgNode\* p\_parent : 0x1d85be0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4e048  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4e0a0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4de38  
SgVariableSymbol\* p\_symbol : 0x18412f0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6c5e0  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

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SgNode\* p\_parent : 0x1d85be0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4e258  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4e2b0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4dff0  
SgExpressionPtrList p\_expressions : [0x1d53200]



pointer:0x1d53200  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 44:20  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1d6c5e0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4e150  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4e1a8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4dd30  
SgVariableSymbol\* p\_symbol : 0x1841320  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1f45830  
SgExprStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 46:7  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4ae358  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4e678  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4e6d0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1e8f300

pointer:0x1e8f300  
SgNullExpression  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

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SgNode\* p\_parent : 0x1f45830  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4e5c8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4e620  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4e200

pointer:0x7f5ede69d7d0  
SgClassDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 49:3  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: RAJA\_\_scope\_\_seq\_exec

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SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4e888  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4e8e0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0x1fc8340  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede69d7d0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede69d530  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : seq\_exec  
SgClassDeclaration::class\_types p\_class\_type : 1  
SgClassType\* p\_type : 0x1cc9460  
SgClassDefinition\* p\_definition : 0x7f5ede649870  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_from\_template : 0  
bool p\_fixupScope : 0  
bool p\_isUnNamed : 0  
bool p\_explicit\_annotation\_interface : 0  
bool p\_explicit\_interface : 0  
bool p\_explicit\_enum : 0  
bool p\_explicit\_anonymous : 0  
SgExprListExp\* p\_decoratorList : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_isAutonomousDeclaration : 1  
bool p\_isRepresentingTemplateParameterInTemplateDeclaration : 0

pointer:0x7f5ede649870  
SgClassDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 49:3  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede69d7d0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4e830  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4e7d8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8698a40  
SgTypeTable\* p\_type\_table : 0x15f5ec8  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgDeclarationStatementPtrList p\_members : []  
SgBaseClassPtrList p\_inheritances : []  
unsigned int p\_packingAlignment : 0  
bool p\_isSequence : 0  
bool p\_isPrivate : 0  
bool p\_isAbstract : 0

pointer:0x7f5ede1744d8  
SgTemplateFunctionDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 52:5  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L68R\_\_L69R

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SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4e990  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4e938  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0x1719db0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede1744d8  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede1740b0  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : forall  
SgFunctionParameterList\* p\_parameterList : 0x7f5edea4bf70  
SgFunctionModifier p\_functionModifier : <too long>: <too long>: SgFunctionModifier(isUnknown() = false isDefault() = true isInline()  
SgSpecialFunctionModifier p\_specialFunctionModifier : <too long>: <too long>: SgSpecialFunctionModifier(isUnknown() = false isDefault()  
SgTypePtrList p\_exceptionSpecification : []  
bool p\_named\_in\_end\_statement : 0  
std::string p\_asm\_name :  
SgExprListExp\* p\_decoratorList : 0  
SgFunctionType\* p\_type : 0x7f5ede989a10  
SgFunctionDefinition\* p\_definition : 0x7f5ede128270  
bool p\_oldStyleDefinition : 0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresNameQualificationOnReturnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
SgDeclarationStatement::gnu\_extension\_visibility\_attribute\_enum p\_gnu\_extension\_visibility : 1  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
int p\_name\_qualification\_length\_for\_return\_type : 0  
bool p\_type\_elaboration\_required\_for\_return\_type : 0  
bool p\_global\_qualification\_required\_for\_return\_type : 0  
bool p\_prototypelsWithoutParameters : 0  
int p\_gnu\_regparm\_attribute : -1  
SgFunctionType\* p\_type\_syntax : 0  
bool p\_type\_syntax\_is\_available : 0  
bool p\_using\_C11\_Noreturn\_keyword : 0  
bool p\_is\_constexpr : 0  
bool p\_using\_new\_function\_return\_type\_syntax : 0  
SgFunctionParameterScope\* p\_functionParameterScope : 0  
SgTemplateParameterPtrList p\_templateParameters : [0x1ed31c0]  
SgTemplateArgumentPtrList p\_templateSpecializationArguments : []  
SgName p\_string : <too long>: <too long>: template < typename LOOP\_BODY > void forall ( seq\_exec,  
bool p\_string\_represents\_function\_body : 0

pointer:0x7f5edea4bf70  
SgFunctionParameterList  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 52:5  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L69R

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SgNode\* p\_parent : 0x7f5ede1744d8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4f228  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4f280  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edea4bf70  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgInitializedNamePtrList p\_args : [0x7f5ede41ca78, 0x7f5ede41cbc0, 0x7f5ede41cd08, 0x7f5ede41ce50]

pointer:0x7f5ede41ca78  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 52:17  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4bf70  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4ee08  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4ee60  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name :  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1cc9460  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede1744d8  
SgStorageModifier\* p\_storageModifier : 0x1e5c598  
SgScopeStatement\* p\_scope : 0x7f5ede128270  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0



pointer:0x7f5ede41cbc0  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 53:20  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4bf70  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4eeb8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4ef10  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : begin  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede1744d8  
SgStorageModifier\* p\_storageModifier : 0x1e5c5c0  
SgScopeStatement\* p\_scope : 0x7f5ede128270  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41cd08  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 53:38  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4bf70  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4ef68  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4efc0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : end  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede1744d8  
SgStorageModifier\* p\_storageModifier : 0x1e5c5e8  
SgScopeStatement\* p\_scope : 0x7f5ede128270  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41ce50  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 54:19  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4bf70  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4f018  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4f070  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : loop\_body  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede2771f0  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede1744d8  
SgStorageModifier\* p\_storageModifier : 0x1e5c610  
SgScopeStatement\* p\_scope : 0x7f5ede128270  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede128270  
SgTemplateFunctionDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 55:5  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede1744d8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4f0c8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4f120  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8698ca0  
SgTypeTable\* p\_type\_table : 0x15f5f18  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgBasicBlock\* p\_body : 0x7f5ede4ae588  
std::map<SgNode\*,int> p\_scope\_number\_list : []

pointer:0x7f5ede4ae588  
SgBasicBlock  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 55:5  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede128270  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4ed58  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4edb0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8698b70  
SgTypeTable\* p\_type\_table : 0x15f5ef0  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1f45890, 0x7f5ede0df138, 0x1f459b0]  
std::string p\_asm\_function\_body :

pointer:0x1f45890  
SgExprStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 56:7  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4ae588  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4f3e0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4f438  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1e8f350

pointer:0x1e8f350  
SgNullExpression  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

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SgNode\* p\_parent : 0x1f45890  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4f330  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4f388  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4f178

pointer:0x7f5ede0df138  
SgForStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:7  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4ae588  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e504b8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e50510  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8698dd0  
SgTypeTable\* p\_type\_table : 0x15f5f40  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgForInitStatement\* p\_for\_init\_stmt : 0x1f5e040  
SgStatement\* p\_test : 0x1f458f0  
SgExpression\* p\_increment : 0x1fae6a8  
SgStatement\* p\_loop\_body : 0x7f5ede4ae6a0  
SgStatement\* p\_else\_body : 0  
std::string p\_string\_label :



pointer:0x1f5e040  
SgForInitStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:13  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede0df138  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4f8b0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4f908  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgStatementPtrList p\_init\_stmt : [0x7f5ede5906b0]

pointer:0x7f5ede5906b0  
SgVariableDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:13  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: \_\_variable\_declaration\_\_variable\_type\_L63R\_variable\_name\_L68R\_\_L69R\_\_scope\_\_\_\_SgSS2\_\_\_\_scope\_\_\_\_

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SgNode\* p\_parent : 0x1f5e040  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4f5f0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4f648  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 1  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede5906b0  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgDeclarationStatement\* p\_baseTypeDefiningDeclaration : 0  
SgInitializedNamePtrList p\_variables : [0x7f5ede41cf98]  
bool p\_variableDeclarationContainsBaseTypeDefiningDeclaration : 0  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresGlobalNameQualificationOnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
unsigned short p\_gnu\_extension\_initialization\_priority : 0  
SgDeclarationStatement::gnu\_extension\_visibility\_attribute\_enum p\_gnu\_extension\_visibility : 0  
SgVariableDeclaration::gnu\_extension\_declaration\_attributes\_enum p\_gnu\_extension\_declaration\_attribute : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_isAssociatedWithDeclarationList : 0  
bool p\_isFirstDeclarationOfDeclarationList : 1  
bool p\_is\_thread\_local : 0  
bool p\_is\_constexpr : 0

pointer:0x7f5ede41cf98  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:13  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede5906b0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4f598  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4f540  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : ii  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0x1f79aa8  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede4ffd60  
SgStorageModifier\* p\_storageModifier : 0x1e5c638  
SgScopeStatement\* p\_scope : 0x7f5ede0df138  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visibility\_enum p\_gnu\_attribute\_visibility : 2  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x1f79aa8  
SgAssignInitializer  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x7f5ede41cf98  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4f800  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4f7a8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4f4e8  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgExpression\* p\_operand\_i : 0x1d53268  
SgType\* p\_expression\_type : 0

pointer:0x1d53268  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:29  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1f79aa8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4f6f8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4f750  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4f490  
SgVariableSymbol\* p\_symbol : 0x1841380  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1f458f0  
SgExprStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:37  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede0df138  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4fc78  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4fcd0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1f93120

pointer:0x1f93120  
SgLessThanOp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:40  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: bool

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SgNode\* p\_parent : 0x1f458f0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4fbc8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4fc20  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4f960  
SgExpression\* p\_lhs\_operand\_i : 0x1d532d0  
SgExpression\* p\_rhs\_operand\_i : 0x1d53338  
SgType\* p\_expression\_type : 0  
SgExpression\* p\_originalExpressionTree : 0

pointer:0x1d532d0  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:37  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1f93120  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4f9b8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4fa10  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4f858  
SgVariableSymbol\* p\_symbol : 0x1841410  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0



pointer:0x1d53338  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:42  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1f93120  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4fac0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4fb18  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4f6a0  
SgVariableSymbol\* p\_symbol : 0x18413b0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1fae6a8  
SgPlusPlusOp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:48  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x7f5ede0df138  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4fe88  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4fee0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4fa68  
SgExpression\* p\_operand\_i : 0x1d533a0  
SgType\* p\_expression\_type : 0  
SgUnaryOp::Sgop\_mode p\_mode : 0

pointer:0x1d533a0  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:50  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1fae6a8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4fd80  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4fdd8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 1  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4fb70  
SgVariableSymbol\* p\_symbol : 0x1841410  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x7f5ede4ae6a0  
SgBasicBlock  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:55  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede0df138  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e4ff38  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e4ff90  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8698f00  
SgTypeTable\* p\_type\_table : 0x15f5f68  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1f45950]  
std::string p\_asm\_function\_body :

pointer:0x1f45950  
SgExprStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 59:9  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede4ae6a0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e50408  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e50460  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1d85c50

pointer:0x1d85c50  
SgFunctionCallExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 59:18  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: UNKNOWN

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SgNode\* p\_parent : 0x1f45950  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e50358  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e503b0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e500f0  
SgExpression\* p\_function : 0x1d53408  
SgExprListExp\* p\_args : 0x1d6c648  
SgType\* p\_expression\_type : 0x7f5ede2771f0  
bool p\_uses\_operator\_syntax : 0

pointer:0x1d53408  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 59:9  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: LOOP\_BODY

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d85c50  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e50040  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e50098  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4fe30  
SgVariableSymbol\* p\_symbol : 0x18413e0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6c648  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d85c50  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e50250  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e502a8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4ffe8  
SgExpressionPtrList p\_expressions : [0x1d53470]



pointer:0x1d53470  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 59:20  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1d6c648  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e50148  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e501a0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e4fd28  
SgVariableSymbol\* p\_symbol : 0x1841410  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1f459b0  
SgExprStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 61:7  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4ae588  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e50670  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e506c8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1e8f3a0

pointer:0x1e8f3a0  
SgNullExpression  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f459b0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e505c0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e50618  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e501f8

pointer:0x7f5ede32c280  
SgNamespaceDeclarationStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 65:3  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: RAJA\_\_scope\_\_switcher

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SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e50880  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e508d8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0x1719dd0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFriend() = false)  
bool p\_nameOnly : 0  
bool p\_forward : 1  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede32c280  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : switcher  
SgNamespaceDefinitionStatement\* p\_definition : 0x7f5ede3c5280  
bool p\_isUnnamedNamespace : 0  
bool p\_isInlinedNamespace : 0

pointer:0x7f5ede3c5280  
SgNamespaceDefinitionStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 65:22  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede32c280  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e50568  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e50300  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0x2051e20  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8699030  
SgTypeTable\* p\_type\_table : 0x15f5f90  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgDeclarationStatementPtrList p\_declarations : [0x7f5ede038010, 0x7f5ede91db60]  
SgNamespaceDeclarationStatement\* p\_namespaceDeclaration : 0x7f5ede32c280  
SgNamespaceDefinitionStatement\* p\_previousNamespaceDefinition : 0  
SgNamespaceDefinitionStatement\* p\_nextNamespaceDefinition : 0  
SgNamespaceDefinitionStatement\* p\_global\_definition : 0x7f5ede3c53b8  
bool p\_isUnionOfReentrantNamespaceDefinitions : 0

pointer:0x7f5ede038010  
SgEnumDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 66:5  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L61R

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SgNode\* p\_parent : 0x7f5ede3c5280  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e509e0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e50a38  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede038010  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede0382b8  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : POLICY\_TYPE  
bool p\_embedded : 0  
SgEnumType\* p\_type : 0x1fc9fc0  
SgInitializedNamePtrList p\_enumerators : [0x7f5ede41d0e0, 0x7f5ede41d228, 0x7f5ede41d370]  
SgScopeStatement\* p\_scope : 0x7f5ede3c5280  
bool p\_isUnNamed : 0  
bool p\_isAutonomousDeclaration : 1  
SgType\* p\_field\_type : 0  
bool p\_isScopedEnum : 0

pointer:0x7f5ede41d0e0  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 67:7  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede038010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e50930  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e50cf8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : seq\_exec  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1ab2e60  
SgInitializer\* p\_initptr : 0x1f79b10  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede038010  
SgStorageModifier\* p\_storageModifier : 0x1e5c660  
SgScopeStatement\* p\_scope : 0x7f5ede3c5280  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x1f79b10  
SgAssignInitializer  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 67:18  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede41d0e0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e50bf0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e50c48  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e50ca0  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgExpression\* p\_operand\_i : 0x7f5ede010010  
SgType\* p\_expression\_type : 0



pointer:0x7f5ede010010  
SgEnumVal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 67:18  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f79b10  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e50a90  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e50988  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e50b98  
SgExpression\* p\_originalExpressionTree : 0  
int p\_value : 0  
SgEnumDeclaration\* p\_declaration : 0x7f5ede038010  
SgName p\_name : seq\_exec  
bool p\_requiresNameQualification : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x7f5ede41d228  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 68:7  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede038010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e50e58  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e50fb8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : omp\_parallel\_for\_exec  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1ab2e60  
SgInitializer\* p\_initptr : 0x1f79b78  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede038010  
SgStorageModifier\* p\_storageModifier : 0x1e5c688  
SgScopeStatement\* p\_scope : 0x7f5ede3c5280  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x1f79b78  
SgAssignInitializer  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede41d228  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e50eb0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e50f08  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e50f60  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgExpression\* p\_operand\_i : 0x7f5ede0100b0  
SgType\* p\_expression\_type : 0

pointer:0x7f5ede0100b0  
SgEnumVal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 68:7  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f79b78  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e50da8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e50e00  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e50ae8  
SgExpression\* p\_originalExpressionTree : 0  
int p\_value : 1  
SgEnumDeclaration\* p\_declaration : 0x7f5ede038010  
SgName p\_name : omp\_parallel\_for\_exec  
bool p\_requiresNameQualification : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x7f5ede41d370  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 69:7  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede038010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e51118  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e51278  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : NUM\_POLICIES  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1ab2e60  
SgInitializer\* p\_initptr : 0x1f79be0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede038010  
SgStorageModifier\* p\_storageModifier : 0x1e5c6b0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5280  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x1f79be0  
SgAssignInitializer  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede41d370  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e51170  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e511c8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e51220  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgExpression\* p\_operand\_i : 0x7f5ede010150  
SgType\* p\_expression\_type : 0

pointer:0x7f5ede010150  
SgEnumVal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 69:7  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f79be0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e51068  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e510c0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e50d50  
SgExpression\* p\_originalExpressionTree : 0  
int p\_value : 2  
SgEnumDeclaration\* p\_declaration : 0x7f5ede038010  
SgName p\_name : NUM\_POLICIES  
bool p\_requiresNameQualification : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x7f5ede91db60  
SgFunctionDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 72:5  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L70R\_\_L71R

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede3c5280  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e51328  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e512d0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede91db60  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede91d798  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : getRandomPolicy  
SgFunctionParameterList\* p\_parameterList : 0x7f5edea4c410  
SgFunctionModifier p\_functionModifier : <too long>: <too long>: SgFunctionModifier(isUnknown() = false isDefault() = true isInline()  
SgSpecialFunctionModifier p\_specialFunctionModifier : <too long>: <too long>: SgSpecialFunctionModifier(isUnknown() = false isDefault()  
SgTypePtrList p\_exceptionSpecification : []  
bool p\_named\_in\_end\_statement : 0  
std::string p\_asm\_name :  
SgExprListExp\* p\_decoratorList : 0  
SgFunctionType\* p\_type : 0x7f5ede989aa0  
SgFunctionDefinition\* p\_definition : 0x7f5ede463270  
bool p\_oldStyleDefinition : 0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5280  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresNameQualificationOnReturnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
SgDeclarationStatement::gnu\_extension\_visability\_attribute\_enum p\_gnu\_extension\_visability : 1  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
int p\_name\_qualification\_length\_for\_return\_type : 0  
bool p\_type\_elaboration\_required\_for\_return\_type : 0  
bool p\_global\_qualification\_required\_for\_return\_type : 0  
bool p\_prototypelsWithoutParameters : 0  
int p\_gnu\_regparm\_attribute : -1  
SgFunctionType\* p\_type\_syntax : 0  
bool p\_type\_syntax\_is\_available : 0  
bool p\_using\_C11\_Noreturn\_keyword : 0  
bool p\_is\_constexpr : 0  
bool p\_using\_new\_function\_return\_type\_syntax : 0  
SgFunctionParameterScope\* p\_functionParameterScope : 0



pointer:0x7f5edea4c410  
SgFunctionParameterList  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 72:5  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L71R

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SgNode\* p\_parent : 0x7f5ede91db60  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e51640  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e51698  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edea4c410  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgInitializedNamePtrList p\_args : []

pointer:0x7f5ede463270  
SgFunctionDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 74:25  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede91db60  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e514e0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e51538  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee86993c0  
SgTypeTable\* p\_type\_table : 0x15f6008  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgBasicBlock\* p\_body : 0x7f5ede4ae7b8  
std::map<SgNode\*,int> p\_scope\_number\_list : []

pointer:0x7f5ede4ae7b8  
SgBasicBlock  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 74:25  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede463270  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e51430  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e51488  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8699290  
SgTypeTable\* p\_type\_table : 0x15f5fe0  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x7f5ede590940, 0x7f5eddfc5010]  
std::string p\_asm\_function\_body :

pointer:0x7f5ede590940  
SgVariableDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 75:9  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: \_\_variable\_declaration\_\_variable\_type\_i\_variable\_name\_L70R\_\_L71R\_\_scope\_\_\_\_SgSS2\_\_\_\_scope\_\_coin\_

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SgNode\* p\_parent : 0x7f5ede4ae7b8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e51850  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e518a8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 1  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede590940  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgDeclarationStatement\* p\_baseTypeDefiningDeclaration : 0  
SgInitializedNamePtrList p\_variables : [0x7f5ede41d4b8]  
bool p\_variableDeclarationContainsBaseTypeDefiningDeclaration : 0  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresGlobalNameQualificationOnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
unsigned short p\_gnu\_extension\_initialization\_priority : 0  
SgDeclarationStatement::gnu\_extension\_visibility\_attribute\_enum p\_gnu\_extension\_visibility : 0  
SgVariableDeclaration::gnu\_extension\_declaration\_attributes\_enum p\_gnu\_extension\_declaration\_attribute : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_isAssociatedWithDeclarationList : 0  
bool p\_isFirstDeclarationOfDeclarationList : 1  
bool p\_is\_thread\_local : 0  
bool p\_is\_constexpr : 0

pointer:0x7f5ede41d4b8  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 75:9  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede590940  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e517f8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e517a0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : coin\_toss  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1ab2e60  
SgInitializer\* p\_initptr : 0x1f79c48  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede4fffa8  
SgStorageModifier\* p\_storageModifier : 0x1e5c6d8  
SgScopeStatement\* p\_scope : 0x7f5ede4ae7b8  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 2  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x1f79c48  
SgAssignInitializer  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede41d4b8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e51e80  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e51e28  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e51a08  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgExpression\* p\_operand\_i : 0x20047c0  
SgType\* p\_expression\_type : 0

pointer:0x20047c0  
SgModOp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 75:32  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

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SgNode\* p\_parent : 0x1f79c48  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e51d78  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e51dd0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e51c70  
SgExpression\* p\_lhs\_operand\_i : 0x1d85cc0  
SgExpression\* p\_rhs\_operand\_i : 0x1d01c48  
SgType\* p\_expression\_type : 0  
SgExpression\* p\_originalExpressionTree : 0

pointer:0x1d85cc0  
SgFunctionCallExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 75:29  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

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SgNode\* p\_parent : 0x20047c0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e51b68  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e51bc0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e51900  
SgExpression\* p\_function : 0x1d37940  
SgExprListExp\* p\_args : 0x1d6c6b0  
SgType\* p\_expression\_type : 0x7f5ede985d50  
bool p\_uses\_operator\_syntax : 0



pointer:0x1d37940  
SgFunctionRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 75:25  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int()

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SgNode\* p\_parent : 0x1d85cc0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e51958  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e519b0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e516f0  
SgFunctionSymbol\* p\_symbol\_i : 0x1897dd0  
SgFunctionType\* p\_function\_type : 0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6c6b0  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d85cc0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e51a60  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e51ab8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e51748  
SgExpressionPtrList p\_expressions : []

pointer:0x1d01c48  
SgIntVal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 75:34  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

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SgNode\* p\_parent : 0x20047c0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e51c18  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e51b10  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e51cc8  
SgExpression\* p\_originalExpressionTree : 0  
int p\_value : 2  
std::string p\_valueString : 2

pointer:0x7f5eddfc5010  
SgIfStmt  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 76:9  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4ae7b8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203b6a8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203b700  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee86994f0  
SgTypeTable\* p\_type\_table : 0x15f6030  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatement\* p\_conditional : 0x1f45a10  
SgStatement\* p\_true\_body : 0x7f5ede4ae8d0  
SgStatement\* p\_false\_body : 0x7f5ede4ae9e8  
SgLabelRefExp\* p\_else\_numeric\_label : 0  
std::string p\_string\_label :  
SgLabelRefExp\* p\_end\_numeric\_label : 0  
bool p\_has\_end\_statement : 0  
bool p\_use\_then\_keyword : 0  
bool p\_is\_else\_if\_statement : 0

pointer:0x1f45a10  
SgExprStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 76:13  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5eddfc5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e52248  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e522a0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x201fd50

pointer:0x201fd50  
SgGreaterOrEqualOp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 76:23  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: bool

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f45a10  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e52198  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e521f0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e52090  
SgExpression\* p\_lhs\_operand\_i : 0x1d534d8  
SgExpression\* p\_rhs\_operand\_i : 0x1d01cb0  
SgType\* p\_expression\_type : 0  
SgExpression\* p\_originalExpressionTree : 0

pointer:0x1d534d8  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 76:13  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x201fd50  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e51f88  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e51fe0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e51d20  
SgVariableSymbol\* p\_symbol : 0x1841440  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d01cb0  
SgIntVal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 76:26  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x201fd50  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e52038  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e51f30  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x1e520e8  
SgExpression\* p\_originalExpressionTree : 0  
int p\_value : 1  
std::string p\_valueString : 1



pointer:0x7f5ede4ae8d0  
SgBasicBlock  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 76:29  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5eddfc5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e522f8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e52350  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8699620  
SgTypeTable\* p\_type\_table : 0x15f6058  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1da10e0]  
std::string p\_asm\_function\_body :

pointer:0x1da10e0  
SgReturnStmt  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 77:11  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4ae8d0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203b390  
Sg\_File\_Info\* p\_endOfConstruct : 0x203b3e8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x7f5ede0101f0

pointer:0x7f5ede0101f0  
SgEnumVal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 77:18  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

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SgNode\* p\_parent : 0x1da10e0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x1e523a8  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e52140  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203b338  
SgExpression\* p\_originalExpressionTree : 0  
int p\_value : 0  
SgEnumDeclaration\* p\_declaration : 0x7f5ede038010  
SgName p\_name : seq\_exec  
bool p\_requiresNameQualification : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x7f5ede4ae9e8  
SgBasicBlock  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 78:16  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5eddfc5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203b440  
Sg\_File\_Info\* p\_endOfConstruct : 0x203b498  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8699750  
SgTypeTable\* p\_type\_table : 0x15f6080  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1da1140]  
std::string p\_asm\_function\_body :

pointer:0x1da1140  
SgReturnStmt  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 79:11  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4ae9e8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203b5f8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203b650  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x7f5ede010290

pointer:0x7f5ede010290  
SgEnumVal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 79:18  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1da1140  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203b4f0  
Sg\_File\_Info\* p\_endOfConstruct : 0x1e51ed8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203b5a0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_value : 1  
SgEnumDeclaration\* p\_declaration : 0x7f5ede038010  
SgName p\_name : omp\_parallel\_for\_exec  
bool p\_requiresNameQualification : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x7f5ede69dd10  
SgClassDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 96:3  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: RAJA\_\_scope\_\_switcher\_exec

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203b8b8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203b910  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0x2051e00  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede69dd10  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede69da70  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : switcher\_exec  
SgClassDeclaration::class\_types p\_class\_type : 1  
SgClassType\* p\_type : 0x1cc94e0  
SgClassDefinition\* p\_definition : 0x7f5ede6499a0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_from\_template : 0  
bool p\_fixupScope : 0  
bool p\_isUnNamed : 0  
bool p\_explicit\_annotation\_interface : 0  
bool p\_explicit\_interface : 0  
bool p\_explicit\_enum : 0  
bool p\_explicit\_anonymous : 0  
SgExprListExp\* p\_decoratorList : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_isAutonomousDeclaration : 1  
bool p\_isRepresentingTemplateParameterInTemplateDeclaration : 0

pointer:0x7f5ede6499a0  
SgClassDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 96:3  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede69dd10  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203b860  
Sg\_File\_Info\* p\_endOfConstruct : 0x203b808  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8699880  
SgTypeTable\* p\_type\_table : 0x15f60a8  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgDeclarationStatementPtrList p\_members : []  
SgBaseClassPtrList p\_inheritances : []  
unsigned int p\_packingAlignment : 0  
bool p\_isSequence : 0  
bool p\_isPrivate : 0  
bool p\_isAbstract : 0



pointer:0x7f5ede174d28  
SgTemplateFunctionDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 99:5  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L72R\_\_L73R

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SgNode\* p\_parent : 0x7f5ede3c5010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203b9c0  
Sg\_File\_Info\* p\_endOfConstruct : 0x203b968  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0x196d750  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede174d28  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede174900  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : forall  
SgFunctionParameterList\* p\_parameterList : 0x7f5edea4c8b0  
SgFunctionModifier p\_functionModifier : <too long>: <too long>: SgFunctionModifier(isUnknown() = false isDefault() = true isInline()  
SgSpecialFunctionModifier p\_specialFunctionModifier : <too long>: <too long>: SgSpecialFunctionModifier(isUnknown() = false isDefault()  
SgTypePtrList p\_exceptionSpecification : []  
bool p\_named\_in\_end\_statement : 0  
std::string p\_asm\_name :  
SgExprListExp\* p\_decoratorList : 0  
SgFunctionType\* p\_type : 0x7f5ede989b30  
SgFunctionDefinition\* p\_definition : 0x7f5ede1283a0  
bool p\_oldStyleDefinition : 0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresNameQualificationOnReturnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
SgDeclarationStatement::gnu\_extension\_visability\_attribute\_enum p\_gnu\_extension\_visability : 1  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
int p\_name\_qualification\_length\_for\_return\_type : 0  
bool p\_type\_elaboration\_required\_for\_return\_type : 0  
bool p\_global\_qualification\_required\_for\_return\_type : 0  
bool p\_prototypelsWithoutParameters : 0  
int p\_gnu\_regparm\_attribute : -1  
SgFunctionType\* p\_type\_syntax : 0  
bool p\_type\_syntax\_is\_available : 0  
bool p\_using\_C11\_Noreturn\_keyword : 0  
bool p\_is\_constexpr : 0  
bool p\_using\_new\_function\_return\_type\_syntax : 0  
SgFunctionParameterScope\* p\_functionParameterScope : 0  
SgTemplateParameterPtrList p\_templateParameters : [0x1ed3220]  
SgTemplateArgumentPtrList p\_templateSpecializationArguments : []  
SgName p\_string : <too long>: <too long>: template < typename LOOP\_BODY > void forall ( switcher\_exec,  
bool p\_string\_represents\_function\_body : 0

pointer:0x7f5edea4c8b0  
SgFunctionParameterList  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 99:5  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L73R

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SgNode\* p\_parent : 0x7f5ede174d28  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203c258  
Sg\_File\_Info\* p\_endOfConstruct : 0x203c2b0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edea4c8b0  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgInitializedNamePtrList p\_args : [0x7f5ede41db20, 0x7f5ede41dc68, 0x7f5ede41ddb0, 0x7f5ede41def8]

pointer:0x7f5ede41db20  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 99:17  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4c8b0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203be38  
Sg\_File\_Info\* p\_endOfConstruct : 0x203be90  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name :  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1cc94e0  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede174d28  
SgStorageModifier\* p\_storageModifier : 0x1e5c7a0  
SgScopeStatement\* p\_scope : 0x7f5ede1283a0  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visibility\_enum p\_gnu\_attribute\_visibility : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41dc68  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 100:20  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4c8b0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203bee8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203bf40  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : begin  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede174d28  
SgStorageModifier\* p\_storageModifier : 0x1e5c7c8  
SgScopeStatement\* p\_scope : 0x7f5ede1283a0  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41ddb0  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 100:38  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edea4c8b0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203bf98  
Sg\_File\_Info\* p\_endOfConstruct : 0x203bff0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : end  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede174d28  
SgStorageModifier\* p\_storageModifier : 0x1e5c7f0  
SgScopeStatement\* p\_scope : 0x7f5ede1283a0  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41def8  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 101:19  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4c8b0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203c048  
Sg\_File\_Info\* p\_endOfConstruct : 0x203c0a0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : loop\_body  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede277290  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede174d28  
SgStorageModifier\* p\_storageModifier : 0x1e5c818  
SgScopeStatement\* p\_scope : 0x7f5ede1283a0  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede1283a0  
SgTemplateFunctionDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 102:5  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede174d28  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203c0f8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203c150  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8699ae0  
SgTypeTable\* p\_type\_table : 0x15f60f8  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgBasicBlock\* p\_body : 0x7f5ede4aeb00  
std::map<SgNode\*,int> p\_scope\_number\_list : []

pointer:0x7f5ede4aeb00  
SgBasicBlock  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 102:5  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede1283a0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203bd88  
Sg\_File\_Info\* p\_endOfConstruct : 0x203bde0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee86999b0  
SgTypeTable\* p\_type\_table : 0x15f60d0  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x7f5eddf80010]  
std::string p\_asm\_function\_body :



pointer:0x7f5eddf80010  
SgSwitchStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 103:7  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4aeb00  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203e408  
Sg\_File\_Info\* p\_endOfConstruct : 0x203de88  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8699c10  
SgTypeTable\* p\_type\_table : 0x15f6120  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatement\* p\_item\_selector : 0x1f45a70  
SgStatement\* p\_body : 0x7f5ede4aec18  
SgLabelRefExp\* p\_end\_numeric\_label : 0  
std::string p\_string\_label :

pointer:0x1f45a70  
SgExprStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 103:14  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5eddf80010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203c888  
Sg\_File\_Info\* p\_endOfConstruct : 0x203c8e0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1d1b0b0

pointer:0x1d1b0b0  
SgCastExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f45a70  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203c7d8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203c830  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203c570  
SgExpression\* p\_operand\_i : 0x1d85d30  
SgType\* p\_expression\_type : 0x1ab2e60  
SgUnaryOp::Sgop\_mode p\_mode : 0  
SgCastExp::cast\_type\_enum p\_cast\_type : 2  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_castContainsBaseTypeDefiningDeclaration : 0

pointer:0x1d85d30  
SgFunctionCallExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 103:39  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::switcher::POLICY\_TYPE

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SgNode\* p\_parent : 0x1d1b0b0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203c6d0  
Sg\_File\_Info\* p\_endOfConstruct : 0x203c728  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203c468  
SgExpression\* p\_function : 0x1d379b0  
SgExprListExp\* p\_args : 0x1d6c718  
SgType\* p\_expression\_type : 0x7f5ede989aa0  
bool p\_uses\_operator\_syntax : 0

pointer:0x1d379b0  
SgFunctionRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 103:14  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: enum ::RAJA::switcher::POLICY\_TYPE()

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SgNode\* p\_parent : 0x1d85d30  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203c4c0  
Sg\_File\_Info\* p\_endOfConstruct : 0x203c518  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203c410  
SgFunctionSymbol\* p\_symbol\_i : 0x1898eb0  
SgFunctionType\* p\_function\_type : 0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6c718  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d85d30  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203c5c8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203c620  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203c3b8  
SgExpressionPtrList p\_expressions : []

pointer:0x7f5ede4aec18  
SgBasicBlock  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 103:43  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5eddf80010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203c678  
Sg\_File\_Info\* p\_endOfConstruct : 0x203c780  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8699d40  
SgTypeTable\* p\_type\_table : 0x15f6148  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x2069ba0, 0x2069c18]  
std::string p\_asm\_function\_body :

pointer:0x2069ba0  
SgCaseOptionStmt  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 104:14  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4aec18  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203d7a8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203d800  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_key : 0x1d1b128  
SgStatement\* p\_body : 0x7f5ede4aed30  
SgExpression\* p\_key\_range\_end : 0  
std::string p\_case\_construct\_name :



pointer:0x1d1b128  
SgCastExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

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SgNode\* p\_parent : 0x2069ba0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203d6f8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203d750  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203d5f0  
SgExpression\* p\_operand\_i : 0x7f5ede010330  
SgType\* p\_expression\_type : 0x1ab2e60  
SgUnaryOp::Sgop\_mode p\_mode : 0  
SgCastExp::cast\_type\_enum p\_cast\_type : 2  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_castContainsBaseTypeDefiningDeclaration : 0

pointer:0x7f5ede010330  
SgEnumVal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 104:14  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d1b128  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203d598  
Sg\_File\_Info\* p\_endOfConstruct : 0x203d490  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203d648  
SgExpression\* p\_originalExpressionTree : 0  
int p\_value : 0  
SgEnumDeclaration\* p\_declaration : 0x7f5ede038010  
SgName p\_name : seq\_exec  
bool p\_requiresNameQualification : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x7f5ede4aed30  
SgBasicBlock  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x2069ba0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203d2d8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203d330  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8699e70  
SgTypeTable\* p\_type\_table : 0x15f6170  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1f45ad0, 0x20522a0]  
std::string p\_asm\_function\_body :

pointer:0x1f45ad0  
SgExprStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 105:11  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4aed30  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203d178  
Sg\_File\_Info\* p\_endOfConstruct : 0x203d1d0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1d85da0

pointer:0x1d85da0  
SgFunctionCallExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 105:23  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void

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SgNode\* p\_parent : 0x1f45ad0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203d0c8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203d120  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203ce60  
SgExpression\* p\_function : 0x1f0ebf0  
SgExprListExp\* p\_args : 0x1d6c7e8  
SgType\* p\_expression\_type : 0x7f5ede9898f0  
bool p\_uses\_operator\_syntax : 0

pointer:0x1f0ebf0  
SgTemplateFunctionRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 105:11  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void(::RAJA::Index\_type, ::RAJA::Index\_type, LOOP\_BODY )

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SgNode\* p\_parent : 0x1d85da0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203c990  
Sg\_File\_Info\* p\_endOfConstruct : 0x203c9e8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203c308  
SgTemplateFunctionSymbol\* p\_symbol\_i : 0x1f02870  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6c7e8  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d85da0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203cfc0  
Sg\_File\_Info\* p\_endOfConstruct : 0x203d018  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203cd58  
SgExpressionPtrList p\_expressions : [0x1f26320, 0x1d53540, 0x1d535a8, 0x1d53610]

pointer:0x1f26320  
SgConstructorInitializer  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 105:25  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: struct ::RAJA::seq\_exec

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d6c7e8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203c360  
Sg\_File\_Info\* p\_endOfConstruct : 0x203cba0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203ca98  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgMemberFunctionDeclaration\* p\_declaration : 0  
SgExprListExp\* p\_args : 0x1d6c780  
SgType\* p\_expression\_type : 0x1cc9460  
bool p\_need\_name : 1  
bool p\_need\_qualifier : 0  
bool p\_need\_parenthesis\_after\_name : 1  
bool p\_associated\_class\_unknown : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0



pointer:0x1d6c780  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f26320  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203ca40  
Sg\_File\_Info\* p\_endOfConstruct : 0x203c938  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203caf0  
SgExpressionPtrList p\_expressions : []

pointer:0x1d53540  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 105:43  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d6c7e8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203cca8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203cd00  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203cb48  
SgVariableSymbol\* p\_symbol : 0x18414a0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d535a8  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 105:50  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d6c7e8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203cdb0  
Sg\_File\_Info\* p\_endOfConstruct : 0x203ce08  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203cbf8  
SgVariableSymbol\* p\_symbol : 0x18414d0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d53610  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 105:55  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: LOOP\_BODY

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d6c7e8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203ceb8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203cf10  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203cc50  
SgVariableSymbol\* p\_symbol : 0x1841500  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x20522a0  
SgBreakStmt  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 105:68  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4aed30  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203d228  
Sg\_File\_Info\* p\_endOfConstruct : 0x203d280  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
std::string p\_do\_string\_label :

pointer:0x2069c18  
SgCaseOptionStmt  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 106:14  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede4aec18  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203e6c8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203e720  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_key : 0x1d1b1a0  
SgStatement\* p\_body : 0x7f5ede4aee48  
SgExpression\* p\_key\_range\_end : 0  
std::string p\_case\_construct\_name :

pointer:0x1d1b1a0  
SgCastExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x2069c18  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203e618  
Sg\_File\_Info\* p\_endOfConstruct : 0x203e670  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203e510  
SgExpression\* p\_operand\_i : 0x7f5ede0103d0  
SgType\* p\_expression\_type : 0x1ab2e60  
SgUnaryOp::Sgop\_mode p\_mode : 0  
SgCastExp::cast\_type\_enum p\_cast\_type : 2  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_castContainsBaseTypeDefiningDeclaration : 0

pointer:0x7f5ede0103d0  
SgEnumVal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 106:14  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d1b1a0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203e4b8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203e3b0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203e568  
SgExpression\* p\_originalExpressionTree : 0  
int p\_value : 1  
SgEnumDeclaration\* p\_declaration : 0x7f5ede038010  
SgName p\_name : omp\_parallel\_for\_exec  
bool p\_requiresNameQualification : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0



pointer:0x7f5ede4aee48  
SgBasicBlock  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1

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SgNode\* p\_parent : 0x2069c18  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203e1f8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203e250  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee8699fa0  
SgTypeTable\* p\_type\_table : 0x15f6198  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1f45b30, 0x2052300]  
std::string p\_asm\_function\_body :

pointer:0x1f45b30  
SgExprStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 107:11  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4aee48  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203e098  
Sg\_File\_Info\* p\_endOfConstruct : 0x203e0f0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1d85e10

pointer:0x1d85e10  
SgFunctionCallExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 107:23  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void

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SgNode\* p\_parent : 0x1f45b30  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203dfe8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203e040  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203dd80  
SgExpression\* p\_function : 0x1f0ec50  
SgExprListExp\* p\_args : 0x1d6c8b8  
SgType\* p\_expression\_type : 0x7f5ede9898f0  
bool p\_uses\_operator\_syntax : 0

pointer:0x1f0ec50  
SgTemplateFunctionRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 107:11  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void(::RAJA::Index\_type, ::RAJA::Index\_type, LOOP\_BODY )

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d85e10  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203d8b0  
Sg\_File\_Info\* p\_endOfConstruct : 0x203d908  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203cf68  
SgTemplateFunctionSymbol\* p\_symbol\_i : 0x1f02870  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6c8b8  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d85e10  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203dee0  
Sg\_File\_Info\* p\_endOfConstruct : 0x203df38  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203dc78  
SgExpressionPtrList p\_expressions : [0x1f263a0, 0x1d53678, 0x1d536e0, 0x1d53748]

pointer:0x1f263a0  
SgConstructorInitializer  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 107:25  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: struct ::RAJA::omp\_parallel\_for\_exec

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d6c8b8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203d4e8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203dac0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203d9b8  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgMemberFunctionDeclaration\* p\_declaration : 0  
SgExprListExp\* p\_args : 0x1d6c850  
SgType\* p\_expression\_type : 0x1cc90e0  
bool p\_need\_name : 1  
bool p\_need\_qualifier : 0  
bool p\_need\_parenthesis\_after\_name : 1  
bool p\_associated\_class\_unknown : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6c850  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f263a0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203d960  
Sg\_File\_Info\* p\_endOfConstruct : 0x203d858  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203da10  
SgExpressionPtrList p\_expressions : []

pointer:0x1d53678  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 107:56  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d6c8b8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203dbc8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203dc20  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203da68  
SgVariableSymbol\* p\_symbol : 0x18414a0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0



pointer:0x1d536e0  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 107:63  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1d6c8b8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203dcd0  
Sg\_File\_Info\* p\_endOfConstruct : 0x203dd28  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203db18  
SgVariableSymbol\* p\_symbol : 0x18414d0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d53748  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 107:68  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: LOOP\_BODY

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d6c8b8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203ddd8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203de30  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203db70  
SgVariableSymbol\* p\_symbol : 0x1841500  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x2052300  
SgBreakStmt  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 107:81  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4aee48  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203e148  
Sg\_File\_Info\* p\_endOfConstruct : 0x203e1a0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
std::string p\_do\_string\_label :

pointer:0x7f5edde80010  
SgTemplateInstantiationFunctionDecl  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L74R

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SgNode\* p\_parent : 0x7f5ee8565120  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203eb40  
Sg\_File\_Info\* p\_endOfConstruct : 0x203eae8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 1  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5edde81cb8  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edde80010  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : forall < switcher\_exec , >  
SgFunctionParameterList\* p\_parameterList : 0x7f5edea4cb00  
SgFunctionModifier p\_functionModifier : <too long>: <too long>: SgFunctionModifier(isUnknown() = false isDefault() = true isInline()  
SgSpecialFunctionModifier p\_specialFunctionModifier : <too long>: <too long>: SgSpecialFunctionModifier(isUnknown() = false isDefault()  
SgTypePtrList p\_exceptionSpecification : []  
bool p\_named\_in\_end\_statement : 0  
std::string p\_asm\_name :  
SgExprListExp\* p\_decoratorList : 0  
SgFunctionType\* p\_type : 0x7f5ede989bc0  
SgFunctionDefinition\* p\_definition : 0  
bool p\_oldStyleDefinition : 0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresNameQualificationOnReturnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
SgDeclarationStatement::gnu\_extension\_visability\_attribute\_enum p\_gnu\_extension\_visability : 1  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
int p\_name\_qualification\_length\_for\_return\_type : 0  
bool p\_type\_elaboration\_required\_for\_return\_type : 0  
bool p\_global\_qualification\_required\_for\_return\_type : 0  
bool p\_prototypelsWithoutParameters : 0  
int p\_gnu\_regparm\_attribute : -1  
SgFunctionType\* p\_type\_syntax : 0x7f5ede989bc0  
bool p\_type\_syntax\_is\_available : 1  
bool p\_using\_C11\_Noreturn\_keyword : 0  
bool p\_is\_constexpr : 0  
bool p\_using\_new\_function\_return\_type\_syntax : 0  
SgFunctionParameterScope\* p\_functionParameterScope : 0  
SgName p\_templateName : forall  
SgTemplateFunctionDeclaration\* p\_templateDeclaration : 0x7f5ede173010  
SgTemplateArgumentPtrList p\_templateArguments : [0x1eea990, 0x1eea9f0]  
bool p\_nameResetFromMangledForm : 1  
bool p\_template\_argument\_list\_is\_explicit : 1

pointer:0x7f5edea4cb00  
SgFunctionParameterList  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L75R

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edde80010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203e778  
Sg\_File\_Info\* p\_endOfConstruct : 0x203e7d0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFriend() = false)  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edea4cb00  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgInitializedNamePtrList p\_args : [0x7f5ede41e040, 0x7f5ede41e188, 0x7f5ede41e2d0]

pointer:0x7f5ede41e040  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edea4cb00  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203e828  
Sg\_File\_Info\* p\_endOfConstruct : 0x203e880  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : begin  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde80010  
SgStorageModifier\* p\_storageModifier : 0x1e5c840  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41e188  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edea4cb00  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203e8d8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203e930  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : end  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde80010  
SgStorageModifier\* p\_storageModifier : 0x1e5c868  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41e2d0  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edea4cb00  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203ea38  
Sg\_File\_Info\* p\_endOfConstruct : 0x203ea90  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : loop\_body  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1cc9560  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde80010  
SgStorageModifier\* p\_storageModifier : 0x1e5c890  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0



pointer:0x7f5ede91e2f0  
SgFunctionDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 112:1  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: main\_0x7f5ede91e2f0

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SgNode\* p\_parent : 0x7f5ee8565120  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203ebf0  
Sg\_File\_Info\* p\_endOfConstruct : 0x203eb98  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0x184fd80  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede91e2f0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede91df28  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : main  
SgFunctionParameterList\* p\_parameterList : 0x7f5edea4cfa0  
SgFunctionModifier p\_functionModifier : <too long>: <too long>: SgFunctionModifier(isUnknown() = false isDefault() = true isInline()  
SgSpecialFunctionModifier p\_specialFunctionModifier : <too long>: <too long>: SgSpecialFunctionModifier(isUnknown() = false isDefault()  
SgTypePtrList p\_exceptionSpecification : []  
bool p\_named\_in\_end\_statement : 0  
std::string p\_asm\_name :  
SgExprListExp\* p\_decoratorList : 0  
SgFunctionType\* p\_type : 0x7f5ede985d50  
SgFunctionDefinition\* p\_definition : 0x7f5ede4633a0  
bool p\_oldStyleDefinition : 0  
SgScopeStatement\* p\_scope : 0x7f5ee8565120  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresNameQualificationOnReturnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
SgDeclarationStatement::gnu\_extension\_visability\_attribute\_enum p\_gnu\_extension\_visability : 1  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
int p\_name\_qualification\_length\_for\_return\_type : 0  
bool p\_type\_elaboration\_required\_for\_return\_type : 0  
bool p\_global\_qualification\_required\_for\_return\_type : 0  
bool p\_prototypelsWithoutParameters : 0  
int p\_gnu\_regparm\_attribute : -1  
SgFunctionType\* p\_type\_syntax : 0  
bool p\_type\_syntax\_is\_available : 0  
bool p\_using\_C11\_Noreturn\_keyword : 0  
bool p\_is\_constexpr : 0  
bool p\_using\_new\_function\_return\_type\_syntax : 0  
SgFunctionParameterScope\* p\_functionParameterScope : 0

pointer:0x7f5edea4cfa0  
SgFunctionParameterList  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 112:1  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L76R

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SgNode\* p\_parent : 0x7f5ede91e2f0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203ef08  
Sg\_File\_Info\* p\_endOfConstruct : 0x203ef60  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edea4cfa0  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgInitializedNamePtrList p\_args : []

pointer:0x7f5ede4633a0  
SgFunctionDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 113:1  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede91e2f0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203eda8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203ee00  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869a200  
SgTypeTable\* p\_type\_table : 0x15f61e8  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgBasicBlock\* p\_body : 0x7f5ede4aef60  
std::map<SgNode\*,int> p\_scope\_number\_list : [0x7f5ede4633a0->1, 0x7f5ede4aef60->2]

pointer:0x7f5ede4aef60  
SgBasicBlock  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 113:1  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4633a0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203ecf8  
Sg\_File\_Info\* p\_endOfConstruct : 0x203ed50  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869a0d0  
SgTypeTable\* p\_type\_table : 0x15f61c0  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x7f5ede590bd0, 0x7f5ede590e60, 0x1f45bf0, 0x1da11a0]  
std::string p\_asm\_function\_body :

pointer:0x7f5ede590bd0  
SgVariableDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 114:3  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: \_\_variable\_declaration\_\_variable\_type\_Ci\_variable\_name\_main\_0x7f5ede91e2f0\_\_scope\_\_\_\_SgSS2\_\_\_\_sco

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede4aef60  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203f118  
Sg\_File\_Info\* p\_endOfConstruct : 0x203f170  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 1  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede590bd0  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgDeclarationStatement\* p\_baseTypeDefiningDeclaration : 0  
SgInitializedNamePtrList p\_variables : [0x7f5ede41e418]  
bool p\_variableDeclarationContainsBaseTypeDefiningDeclaration : 0  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresGlobalNameQualificationOnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
unsigned short p\_gnu\_extension\_initialization\_priority : 0  
SgDeclarationStatement::gnu\_extension\_visibility\_attribute\_enum p\_gnu\_extension\_visibility : 0  
SgVariableDeclaration::gnu\_extension\_declaration\_attributes\_enum p\_gnu\_extension\_declaration\_attribute : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_isAssociatedWithDeclarationList : 0  
bool p\_isFirstDeclarationOfDeclarationList : 1  
bool p\_is\_thread\_local : 0  
bool p\_is\_constexpr : 0

pointer:0x7f5ede41e418  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 114:3  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede590bd0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203f0c0  
Sg\_File\_Info\* p\_endOfConstruct : 0x203f068  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : n  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede8416f0  
SgInitializer\* p\_initptr : 0x1f79cb0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede5001f0  
SgStorageModifier\* p\_storageModifier : 0x1e5c8b8  
SgScopeStatement\* p\_scope : 0x7f5ede4aef60  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 2  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x1f79cb0  
SgAssignInitializer  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

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SgNode\* p\_parent : 0x7f5ede41e418  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203f328  
Sg\_File\_Info\* p\_endOfConstruct : 0x203f2d0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203f010  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgExpression\* p\_operand\_i : 0x1d01eb8  
SgType\* p\_expression\_type : 0

pointer:0x1d01eb8  
SgIntVal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 114:16  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

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SgNode\* p\_parent : 0x1f79cb0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203f220  
Sg\_File\_Info\* p\_endOfConstruct : 0x203f278  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203efb8  
SgExpression\* p\_originalExpressionTree : 0  
int p\_value : 15  
std::string p\_valueString : 15



pointer:0x7f5ede590e60  
SgVariableDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 115:3  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: \_\_variable\_declaration\_\_variable\_type\_\_Pb\_\_d\_\_Pe\_\_variable\_name\_main\_0x7f5ede91e2f0\_\_scope\_\_S

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede4aef60  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203f538  
Sg\_File\_Info\* p\_endOfConstruct : 0x203f590  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 1  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede590e60  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgDeclarationStatement\* p\_baseTypeDefiningDeclaration : 0  
SgInitializedNamePtrList p\_variables : [0x7f5ede41e560]  
bool p\_variableDeclarationContainsBaseTypeDefiningDeclaration : 0  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresGlobalNameQualificationOnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
unsigned short p\_gnu\_extension\_initialization\_priority : 0  
SgDeclarationStatement::gnu\_extension\_visibility\_attribute\_enum p\_gnu\_extension\_visibility : 0  
SgVariableDeclaration::gnu\_extension\_declaration\_attributes\_enum p\_gnu\_extension\_declaration\_attribute : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_isAssociatedWithDeclarationList : 0  
bool p\_isFirstDeclarationOfDeclarationList : 1  
bool p\_is\_thread\_local : 0  
bool p\_is\_constexpr : 0

pointer:0x7f5ede41e560  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 115:3  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede590e60  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203f4e0  
Sg\_File\_Info\* p\_endOfConstruct : 0x203f488  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : a  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1ad0858  
SgInitializer\* p\_initptr : 0x1f79d18  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede500438  
SgStorageModifier\* p\_storageModifier : 0x1e5c8e0  
SgScopeStatement\* p\_scope : 0x7f5ede4aef60  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 2  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x1f79d18  
SgAssignInitializer  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: double(\*)[15]

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede41e560  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203fa60  
Sg\_File\_Info\* p\_endOfConstruct : 0x203fa08  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203f7f8  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgExpression\* p\_operand\_i : 0x7f5edde5e010  
SgType\* p\_expression\_type : 0

pointer:0x7f5edde5e010  
SgNewExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 115:15  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: double(\*)[15]

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f79d18  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203f958  
Sg\_File\_Info\* p\_endOfConstruct : 0x203f9b0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203f748  
SgType\* p\_specified\_type : 0x7f5ede623f40  
SgExprListExp\* p\_placement\_args : 0  
SgConstructorInitializer\* p\_constructor\_args : 0x1f26420  
SgExpression\* p\_builtin\_args : 0  
short p\_need\_global\_specifier : 0  
SgFunctionDeclaration\* p\_newOperatorDeclaration : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1f26420  
SgConstructorInitializer  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: double [15]

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edde5e010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203f850  
Sg\_File\_Info\* p\_endOfConstruct : 0x203f8a8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 1  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203f430  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgMemberFunctionDeclaration\* p\_declaration : 0  
SgExprListExp\* p\_args : 0x1d6c920  
SgType\* p\_expression\_type : 0x7f5ede623f40  
bool p\_need\_name : 0  
bool p\_need\_qualifier : 0  
bool p\_need\_parenthesis\_after\_name : 0  
bool p\_associated\_class\_unknown : 1  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6c920  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

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SgNode\* p\_parent : 0x1f26420  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203f6f0  
Sg\_File\_Info\* p\_endOfConstruct : 0x203f5e8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203f7a0  
SgExpressionPtrList p\_expressions : []

pointer:0x1f45bf0  
SgExprStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 119:3  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4aef60  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20418a0  
Sg\_File\_Info\* p\_endOfConstruct : 0x20418f8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0x178cbb0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1d85e80

pointer:0x1d85e80  
SgFunctionCallExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 120:5  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void

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SgNode\* p\_parent : 0x1f45bf0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20417f0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041848  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20406c0  
SgExpression\* p\_function : 0x1d37a20  
SgExprListExp\* p\_args : 0x1d6c988  
SgType\* p\_expression\_type : 0x7f5ede989bc0  
bool p\_uses\_operator\_syntax : 0



pointer:0x1d37a20  
SgFunctionRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 119:3  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void(::RAJA::Index\_type, ::RAJA::Index\_type, class )

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SgNode\* p\_parent : 0x1d85e80  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203fb68  
Sg\_File\_Info\* p\_endOfConstruct : 0x203fbc0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203f900  
SgFunctionSymbol\* p\_symbol\_i : 0x1898ee0  
SgFunctionType\* p\_function\_type : 0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6c988  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

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SgNode\* p\_parent : 0x1d85e80  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20416e8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041740  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20415e0  
SgExpressionPtrList p\_expressions : [0x1d01f88, 0x1d537b0, 0x214e3f0]

pointer:0x1d01f88  
SgIntVal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 120:6  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d6c988  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203fc18  
Sg\_File\_Info\* p\_endOfConstruct : 0x203fb10  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203fcc8  
SgExpression\* p\_originalExpressionTree : 0  
int p\_value : 0  
std::string p\_valueString : 0

pointer:0x1d537b0  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 120:9  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: const int

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SgNode\* p\_parent : 0x1d6c988  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203fe80  
Sg\_File\_Info\* p\_endOfConstruct : 0x203fed8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203fab8  
SgVariableSymbol\* p\_symbol : 0x1841530  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x214e3f0  
SgLambdaExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 121:6  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void

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SgNode\* p\_parent : 0x1d6c988  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2041588  
Sg\_File\_Info\* p\_endOfConstruct : 0x20413d0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2041638  
SgLambdaCaptureList\* p\_lambda\_capture\_list : 0x2089350  
SgClassDeclaration\* p\_lambda\_closure\_class : 0x7f5ede69dfb0  
SgFunctionDeclaration\* p\_lambda\_function : 0x7f5eddd1d3e8  
bool p\_is\_mutable : 0  
bool p\_capture\_default : 1  
bool p\_default\_is\_by\_reference : 0  
bool p\_explicit\_return\_type : 0  
bool p\_has\_parameter\_decl : 1  
bool p\_is\_device : 0

pointer:0x2089350  
SgLambdaCaptureList  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 121:6  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x214e3f0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x203ff30  
Sg\_File\_Info\* p\_endOfConstruct : 0x203fd78  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLambdaCapturePtrList p\_capture\_list : [0x20a2a70]

pointer:0x20a2a70  
SgLambdaCapture  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 122:6  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x2089350  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2040610  
Sg\_File\_Info\* p\_endOfConstruct : 0x2040668  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgExpression\* p\_capture\_variable : 0x1d53818  
SgExpression\* p\_source\_closure\_variable : 0  
SgExpression\* p\_closure\_variable : 0x1d53880  
bool p\_capture\_by\_reference : 0  
bool p\_implicit : 1  
bool p\_pack\_expansion : 0

pointer:0x1d53818  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 115:3  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: double \*

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SgNode\* p\_parent : 0x20a2a70  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2040038  
Sg\_File\_Info\* p\_endOfConstruct : 0x2040090  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x203fc70  
SgVariableSymbol\* p\_symbol : 0x1841560  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0



pointer:0x1d53880  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 122:6  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: double \*

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x20a2a70  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2040560  
Sg\_File\_Info\* p\_endOfConstruct : 0x20405b8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20402f8  
SgVariableSymbol\* p\_symbol : 0x1841590  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x7f5eddd1d3e8  
SgMemberFunctionDeclaration  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 121:10  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L77R\_\_L78R

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SgNode\* p\_parent : 0x214e3f0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20410b8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2040718  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0x1e8e8d0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5eddd1d3e8  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5eddd1d010  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : operator()  
SgFunctionParameterList\* p\_parameterList : 0x7f5edea4d440  
SgFunctionModifier p\_functionModifier : <too long>: <too long>: SgFunctionModifier(isUnknown() = false isDefault() = true isInline()  
SgSpecialFunctionModifier p\_specialFunctionModifier : <too long>: <too long>: SgSpecialFunctionModifier(isUnknown() = false isDefault()  
SgTypePtrList p\_exceptionSpecification : []  
bool p\_named\_in\_end\_statement : 0  
std::string p\_asm\_name :  
SgExprListExp\* p\_decoratorList : 0  
SgFunctionType\* p\_type : 0x7f5edde0e0b0  
SgFunctionDefinition\* p\_definition : 0x7f5ede4634d0  
bool p\_oldStyleDefinition : 0  
SgScopeStatement\* p\_scope : 0x7f5ede649ad0  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresNameQualificationOnReturnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
SgDeclarationStatement::gnu\_extension\_visability\_attribute\_enum p\_gnu\_extension\_visability : 1  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
int p\_name\_qualification\_length\_for\_return\_type : 0  
bool p\_type\_elaboration\_required\_for\_return\_type : 0  
bool p\_global\_qualification\_required\_for\_return\_type : 0  
bool p\_prototypelsWithoutParameters : 0  
int p\_gnu\_regparm\_attribute : -1  
SgFunctionType\* p\_type\_syntax : 0  
bool p\_type\_syntax\_is\_available : 0  
bool p\_using\_C11\_Noreturn\_keyword : 0  
bool p\_is\_constexpr : 0  
bool p\_using\_new\_function\_return\_type\_syntax : 0  
SgFunctionParameterScope\* p\_functionParameterScope : 0  
SgCtorInitializerList\* p\_CtorInitializerList : 0x7f5eddc8c260  
SgClassDeclaration\* p\_associatedClassDeclaration : 0x7f5ede69e4f0

pointer:0x7f5edea4d440  
SgFunctionParameterList  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 121:10  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L78R

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5eddd1d3e8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2040cf0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2040d48  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edea4d440  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgInitializedNamePtrList p\_args : [0x7f5ede41e938]

pointer:0x7f5ede41e938  
SgInitializedName  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 121:15  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede4d440  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2040a30  
Sg\_File\_Info\* p\_endOfConstruct : 0x2040a88  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : i  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1ab2e60  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5eddd1d3e8  
SgStorageModifier\* p\_storageModifier : 0x1e5c958  
SgScopeStatement\* p\_scope : 0x7f5ede4634d0  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede4634d0  
SgFunctionDefinition  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 121:18  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5eddd1d3e8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2040ae0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2040b38  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869a590  
SgTypeTable\* p\_type\_table : 0x15f6260  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgBasicBlock\* p\_body : 0x7f5ede4af078  
std::map<SgNode\*,int> p\_scope\_number\_list : []

pointer:0x7f5ede4af078  
SgBasicBlock  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 121:18  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede4634d0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2040980  
Sg\_File\_Info\* p\_endOfConstruct : 0x20409d8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869a460  
SgTypeTable\* p\_type\_table : 0x15f6238  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1f45b90]  
std::string p\_asm\_function\_body :

pointer:0x1f45b90  
SgExprStatement  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 122:6  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4af078  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20414d8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041530  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x2132e60

pointer:0x2132e60  
SgAssignOp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 122:11  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: double

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SgNode\* p\_parent : 0x1f45b90  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2041428  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041480  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2041320  
SgExpression\* p\_lhs\_operand\_i : 0x20fe280  
SgExpression\* p\_rhs\_operand\_i : 0x2119810  
SgType\* p\_expression\_type : 0  
SgExpression\* p\_originalExpressionTree : 0



pointer:0x20fe280  
SgPtrArrRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 122:7  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: double

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SgNode\* p\_parent : 0x2132e60  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2041218  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041270  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 1  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2040fb0  
SgExpression\* p\_lhs\_operand\_i : 0x20e2cf0  
SgExpression\* p\_rhs\_operand\_i : 0x1d53950  
SgType\* p\_expression\_type : 0  
SgExpression\* p\_originalExpressionTree : 0

pointer:0x20e2cf0  
SgArrowExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: double \*

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SgNode\* p\_parent : 0x20fe280  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2041008  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041060  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2040da0  
SgExpression\* p\_lhs\_operand\_i : 0x20cb5e0  
SgExpression\* p\_rhs\_operand\_i : 0x1d538e8  
SgType\* p\_expression\_type : 0  
SgExpression\* p\_originalExpressionTree : 0

pointer:0x20cb5e0  
SgThisExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: class \*

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SgNode\* p\_parent : 0x20e2cf0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2040df8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2040e50  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2040b90  
SgClassSymbol\* p\_class\_symbol : 0x1657580  
int p\_pobj\_this : 0

pointer:0x1d538e8  
SgVarRefExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: double \*

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SgNode\* p\_parent : 0x20e2cf0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2040f00  
Sg\_File\_Info\* p\_endOfConstruct : 0x2040f58  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2040be8  
SgVariableSymbol\* p\_symbol : 0x1841590  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d53950  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 122:8  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

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SgNode\* p\_parent : 0x20fe280  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2041110  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041168  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2040ea8  
SgVariableSymbol\* p\_symbol : 0x18415c0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x2119810  
SgDoubleVal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 122:13  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: double

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SgNode\* p\_parent : 0x2132e60  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20412c8  
Sg\_File\_Info\* p\_endOfConstruct : 0x20411c0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2041378  
SgExpression\* p\_originalExpressionTree : 0  
double p\_value : 0.5  
std::string p\_valueString : 0.5

pointer:0x7f5eddc8c260  
SgCtorInitializerList  
NULL\_FILE 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Declaration mangled name: L62R\_constructor\_initialization\_list\_

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SgNode\* p\_parent : 0x7f5eddd1d3e8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2040c40  
Sg\_File\_Info\* p\_endOfConstruct : 0x2040c98  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5eddc8c260  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5eddc8c260  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgInitializedNamePtrList p\_ctors : []

pointer:0x1da11a0  
SgReturnStmt  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 126:3  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4aef60  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2041a58  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041ab0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1d02058



pointer:0x1d02058  
SgIntVal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 126:10  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

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SgNode\* p\_parent : 0x1da11a0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2041950  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041690  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2041a00  
SgExpression\* p\_originalExpressionTree : 0  
int p\_value : 0  
std::string p\_valueString : 0

pointer:0x7f5edde80428  
SgTemplateInstantiationFunctionDecl  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L79R

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SgNode\* p\_parent : 0x7f5ee8565120  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2041ed0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041e78  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 1  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5edde818a0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edde80428  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : forall < >  
SgFunctionParameterList\* p\_parameterList : 0x7f5edea4d690  
SgFunctionModifier p\_functionModifier : <too long>: <too long>: SgFunctionModifier(isUnknown() = false isDefault() = true isInline()  
SgSpecialFunctionModifier p\_specialFunctionModifier : <too long>: <too long>: SgSpecialFunctionModifier(isUnknown() = false isDefault()  
SgTypePtrList p\_exceptionSpecification : []  
bool p\_named\_in\_end\_statement : 0  
std::string p\_asm\_name :  
SgExprListExp\* p\_decoratorList : 0  
SgFunctionType\* p\_type : 0x7f5ede989c50  
SgFunctionDefinition\* p\_definition : 0  
bool p\_oldStyleDefinition : 0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresNameQualificationOnReturnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
SgDeclarationStatement::gnu\_extension\_visability\_attribute\_enum p\_gnu\_extension\_visability : 1  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
int p\_name\_qualification\_length\_for\_return\_type : 0  
bool p\_type\_elaboration\_required\_for\_return\_type : 0  
bool p\_global\_qualification\_required\_for\_return\_type : 0  
bool p\_prototypelsWithoutParameters : 0  
int p\_gnu\_regparm\_attribute : -1  
SgFunctionType\* p\_type\_syntax : 0x7f5ede989c50  
bool p\_type\_syntax\_is\_available : 1  
bool p\_using\_C11\_Noreturn\_keyword : 0  
bool p\_is\_constexpr : 0  
bool p\_using\_new\_function\_return\_type\_syntax : 0  
SgFunctionParameterScope\* p\_functionParameterScope : 0  
SgName p\_templateName : forall  
SgTemplateFunctionDeclaration\* p\_templateDeclaration : 0x7f5ede174900  
SgTemplateArgumentPtrList p\_templateArguments : [0x1eeaa50]  
bool p\_nameResetFromMangledForm : 1  
bool p\_template\_argument\_list\_is\_explicit : 0

pointer:0x7f5edea4d690  
SgFunctionParameterList  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L80R

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SgNode\* p\_parent : 0x7f5edde80428  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2041b08  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041b60  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edea4d690  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgInitializedNamePtrList p\_args : [0x7f5ede41ea80, 0x7f5ede41ebc8, 0x7f5ede41ed10, 0x7f5ede41ee58]

pointer:0x7f5ede41ea80  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4d690  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2041bb8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041c10  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name :  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1cc94e0  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde80428  
SgStorageModifier\* p\_storageModifier : 0x1e5c980  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41ebc8  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edea4d690  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2041c68  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041cc0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : begin  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde80428  
SgStorageModifier\* p\_storageModifier : 0x1e5c9a8  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41ed10  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edea4d690  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2041d18  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041d70  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : end  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde80428  
SgStorageModifier\* p\_storageModifier : 0x1e5c9d0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41ee58  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edea4d690  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2041dc8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041e20  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : loop\_body  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1cc9560  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde80428  
SgStorageModifier\* p\_storageModifier : 0x1e5c9f8  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0



pointer:0x7f5edde80c58  
SgTemplateInstantiationFunctionDecl  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L81R

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ee8565120  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2041f80  
Sg\_File\_Info\* p\_endOfConstruct : 0x2041f28  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5edde80c58  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edde80840  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : forall < >  
SgFunctionParameterList\* p\_parameterList : 0x7f5edea4db30  
SgFunctionModifier p\_functionModifier : <too long>: <too long>: SgFunctionModifier(isUnknown() = false isDefault() = true isInline()  
SgSpecialFunctionModifier p\_specialFunctionModifier : <too long>: <too long>: SgSpecialFunctionModifier(isUnknown() = false isDefault()  
SgTypePtrList p\_exceptionSpecification : []  
bool p\_named\_in\_end\_statement : 0  
std::string p\_asm\_name :  
SgExprListExp\* p\_decoratorList : 0  
SgFunctionType\* p\_type : 0x7f5ede989ce0  
SgFunctionDefinition\* p\_definition : 0x7f5ede463600  
bool p\_oldStyleDefinition : 0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresNameQualificationOnReturnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
SgDeclarationStatement::gnu\_extension\_visability\_attribute\_enum p\_gnu\_extension\_visability : 1  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
int p\_name\_qualification\_length\_for\_return\_type : 0  
bool p\_type\_elaboration\_required\_for\_return\_type : 0  
bool p\_global\_qualification\_required\_for\_return\_type : 0  
bool p\_prototypelsWithoutParameters : 0  
int p\_gnu\_regparm\_attribute : -1  
SgFunctionType\* p\_type\_syntax : 0  
bool p\_type\_syntax\_is\_available : 0  
bool p\_using\_C11\_Noreturn\_keyword : 0  
bool p\_is\_constexpr : 0  
bool p\_using\_new\_function\_return\_type\_syntax : 0  
SgFunctionParameterScope\* p\_functionParameterScope : 0  
SgName p\_templateName : forall  
SgTemplateFunctionDeclaration\* p\_templateDeclaration : 0x7f5ede1740b0  
SgTemplateArgumentPtrList p\_templateArguments : [0x1eeaab0]  
bool p\_nameResetFromMangledForm : 1  
bool p\_template\_argument\_list\_is\_explicit : 0



pointer:0x7f5edea4db30  
SgFunctionParameterList  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L82R

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edde80c58  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2042818  
Sg\_File\_Info\* p\_endOfConstruct : 0x2042870  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edea4db30  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgInitializedNamePtrList p\_args : [0x7f5ede41f4c0, 0x7f5ede41f608, 0x7f5ede41f750, 0x7f5ede41f898]

pointer:0x7f5ede41f4c0  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edea4db30  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20423f8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2042450  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name :  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1cc9460  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde80c58  
SgStorageModifier\* p\_storageModifier : 0x1e5cac0  
SgScopeStatement\* p\_scope : 0x7f5ede463600  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41f608  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edea4db30  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20424a8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2042500  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : begin  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde80c58  
SgStorageModifier\* p\_storageModifier : 0x1e5cae8  
SgScopeStatement\* p\_scope : 0x7f5ede463600  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41f750  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edea4db30  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2042558  
Sg\_File\_Info\* p\_endOfConstruct : 0x20425b0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : end  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde80c58  
SgStorageModifier\* p\_storageModifier : 0x1e5cb10  
SgScopeStatement\* p\_scope : 0x7f5ede463600  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede41f898  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edea4db30  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2042608  
Sg\_File\_Info\* p\_endOfConstruct : 0x2042660  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : loop\_body  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1cc9560  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde80c58  
SgStorageModifier\* p\_storageModifier : 0x1e5cb38  
SgScopeStatement\* p\_scope : 0x7f5ede463600  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede463600  
SgFunctionDefinition  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edde80c58  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20426b8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2042710  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869a7f0  
SgTypeTable\* p\_type\_table : 0x15f62b0  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgBasicBlock\* p\_body : 0x7f5ede4af190  
std::map<SgNode\*,int> p\_scope\_number\_list : []

pointer:0x7f5ede4af190  
SgBasicBlock  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede463600  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2042348  
Sg\_File\_Info\* p\_endOfConstruct : 0x20423a0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869a6c0  
SgTypeTable\* p\_type\_table : 0x15f6288  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1f45c50, 0x7f5ede29f250, 0x7f5ede0df260, 0x1f45d70]  
std::string p\_asm\_function\_body :

pointer:0x1f45c50  
SgExprStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede4af190  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20429d0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2042a28  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1e8f3f0



pointer:0x1e8f3f0  
SgNullExpression  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f45c50  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2042920  
Sg\_File\_Info\* p\_endOfConstruct : 0x2042978  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2042768

pointer:0x7f5ede29f250  
SgPragmaDeclaration  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: pragma\_statement

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SgNode\* p\_parent : 0x7f5ede4af190  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2042b30  
Sg\_File\_Info\* p\_endOfConstruct : 0x2042b88  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFriend  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede29f250  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede29f250  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgPragma\* p\_pragma : 0x1ec14b8

pointer:0x1ec14b8  
SgPragma

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SgNode\* p\_parent : 0x7f5ede29f250  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
std::string p\_name : novector  
Sg\_File\_Info\* p\_startOfConstruct : 0x20427c0  
Sg\_File\_Info\* p\_endOfConstruct : 0x20428c8  
short p\_printed : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0

pointer:0x7f5ede0df260  
SgForStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4af190  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2043e18  
Sg\_File\_Info\* p\_endOfConstruct : 0x2043e70  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869a920  
SgTypeTable\* p\_type\_table : 0x15f62d8  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgForInitStatement\* p\_for\_init\_stmt : 0x1f5e0b0  
SgStatement\* p\_test : 0x1f45cb0  
SgExpression\* p\_increment : 0x1fae710  
SgStatement\* p\_loop\_body : 0x7f5ede4af2a8  
SgStatement\* p\_else\_body : 0  
std::string p\_string\_label :

pointer:0x1f5e0b0  
SgForInitStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede0df260  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2043000  
Sg\_File\_Info\* p\_endOfConstruct : 0x2043058  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgStatementPtrList p\_init\_stmt : [0x7f5ede591380]

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pointer:0x7f5ede41f9e0  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede591380  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2042ce8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2042c90  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : ii  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0x1f79d80  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede5008c8  
SgStorageModifier\* p\_storageModifier : 0x1e5cb60  
SgScopeStatement\* p\_scope : 0x7f5ede0df260  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 2  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x1f79d80  
SgAssignInitializer  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x7f5ede41f9e0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2042f50  
Sg\_File\_Info\* p\_endOfConstruct : 0x2042ef8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2042c38  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgExpression\* p\_operand\_i : 0x1d539b8  
SgType\* p\_expression\_type : 0



pointer:0x1d539b8  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:29  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1f79d80  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2042e48  
Sg\_File\_Info\* p\_endOfConstruct : 0x2042ea0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2042be0  
SgVariableSymbol\* p\_symbol : 0x1841620  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1f45cb0  
SgExprStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede0df260  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20433c8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2043420  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1f93190

pointer:0x1f93190  
SgLessThanOp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:40  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: bool

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SgNode\* p\_parent : 0x1f45cb0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2043318  
Sg\_File\_Info\* p\_endOfConstruct : 0x2043370  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20430b0  
SgExpression\* p\_lhs\_operand\_i : 0x1d53a20  
SgExpression\* p\_rhs\_operand\_i : 0x1d53a88  
SgType\* p\_expression\_type : 0  
SgExpression\* p\_originalExpressionTree : 0

pointer:0x1d53a20  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:37  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1f93190  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2043108  
Sg\_File\_Info\* p\_endOfConstruct : 0x2043160  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2042fa8  
SgVariableSymbol\* p\_symbol : 0x18416b0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d53a88  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:42  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1f93190  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2043210  
Sg\_File\_Info\* p\_endOfConstruct : 0x2043268  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2042df0  
SgVariableSymbol\* p\_symbol : 0x1841650  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1fae710  
SgPlusPlusOp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:48  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x7f5ede0df260  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20435d8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2043630  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20431b8  
SgExpression\* p\_operand\_i : 0x1d53af0  
SgType\* p\_expression\_type : 0  
SgUnaryOp::Sgop\_mode p\_mode : 0

pointer:0x1d53af0  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 58:50  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1fae710  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20434d0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2043528  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 1  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20432c0  
SgVariableSymbol\* p\_symbol : 0x18416b0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x7f5ede4af2a8  
SgBasicBlock  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede0df260  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2043688  
Sg\_File\_Info\* p\_endOfConstruct : 0x20436e0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869aa50  
SgTypeTable\* p\_type\_table : 0x15f6300  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1f45d10]  
std::string p\_asm\_function\_body :



pointer:0x1f45d10  
SgExprStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4af2a8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2043d68  
Sg\_File\_Info\* p\_endOfConstruct : 0x2043dc0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1d85ef0

pointer:0x1d85ef0  
SgFunctionCallExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 59:18  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void

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SgNode\* p\_parent : 0x1f45d10  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2043cb8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2043d10  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2043a50  
SgExpression\* p\_function : 0x2186e50  
SgExprListExp\* p\_args : 0x1d6c9f0  
SgType\* p\_expression\_type : 0x7f5edde0e0b0  
bool p\_uses\_operator\_syntax : 1

pointer:0x2186e50  
SgDotExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: void(int )

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SgNode\* p\_parent : 0x1d85ef0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2043bb0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2043c08  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2043948  
SgExpression\* p\_lhs\_operand\_i : 0x1d53b58  
SgExpression\* p\_rhs\_operand\_i : 0x2169980  
SgType\* p\_expression\_type : 0  
SgExpression\* p\_originalExpressionTree : 0

pointer:0x1d53b58  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 59:9  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: class

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SgNode\* p\_parent : 0x2186e50  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2043898  
Sg\_File\_Info\* p\_endOfConstruct : 0x20438f0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2043738  
SgVariableSymbol\* p\_symbol : 0x1841680  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x2169980  
SgMemberFunctionRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 59:18  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: void(int )

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x2186e50  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2043790  
Sg\_File\_Info\* p\_endOfConstruct : 0x20437e8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2043580  
SgMemberFunctionSymbol\* p\_symbol\_i : 0x20bc0c0  
int p\_virtual\_call : 0  
SgFunctionType\* p\_function\_type : 0  
int p\_need\_qualifier : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6c9f0  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d85ef0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2043aa8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2043b00  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2043478  
SgExpressionPtrList p\_expressions : [0x1d53bc0]

pointer:0x1d53bc0  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 59:20  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d6c9f0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20439a0  
Sg\_File\_Info\* p\_endOfConstruct : 0x20439f8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 1  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2043840  
SgVariableSymbol\* p\_symbol : 0x18416b0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1f45d70  
SgExprStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4af190  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2043fd0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2044028  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1e8f440



pointer:0x1e8f440  
SgNullExpression  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f45d70  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2043f20  
Sg\_File\_Info\* p\_endOfConstruct : 0x2043f78  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2043b58

pointer:0x7f5edde81488  
SgTemplateInstantiationFunctionDecl  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L83R

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ee8565120  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20440d8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2044080  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5edde81488  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edde81070  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : forall < >  
SgFunctionParameterList\* p\_parameterList : 0x7f5edea4dfd0  
SgFunctionModifier p\_functionModifier : <too long>: <too long>: SgFunctionModifier(isUnknown() = false isDefault() = true isInline()  
SgSpecialFunctionModifier p\_specialFunctionModifier : <too long>: <too long>: SgSpecialFunctionModifier(isUnknown() = false isDefault()  
SgTypePtrList p\_exceptionSpecification : []  
bool p\_named\_in\_end\_statement : 0  
std::string p\_asm\_name :  
SgExprListExp\* p\_decoratorList : 0  
SgFunctionType\* p\_type : 0x7f5ede989d70  
SgFunctionDefinition\* p\_definition : 0x7f5ede463730  
bool p\_oldStyleDefinition : 0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresNameQualificationOnReturnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
SgDeclarationStatement::gnu\_extension\_visability\_attribute\_enum p\_gnu\_extension\_visability : 1  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
int p\_name\_qualification\_length\_for\_return\_type : 0  
bool p\_type\_elaboration\_required\_for\_return\_type : 0  
bool p\_global\_qualification\_required\_for\_return\_type : 0  
bool p\_prototypelsWithoutParameters : 0  
int p\_gnu\_regparm\_attribute : -1  
SgFunctionType\* p\_type\_syntax : 0  
bool p\_type\_syntax\_is\_available : 0  
bool p\_using\_C11\_Noreturn\_keyword : 0  
bool p\_is\_constexpr : 0  
bool p\_using\_new\_function\_return\_type\_syntax : 0  
SgFunctionParameterScope\* p\_functionParameterScope : 0  
SgName p\_templateName : forall  
SgTemplateFunctionDeclaration\* p\_templateDeclaration : 0x7f5ede173860  
SgTemplateArgumentPtrList p\_templateArguments : [0x1eeab10]  
bool p\_nameResetFromMangledForm : 1  
bool p\_template\_argument\_list\_is\_explicit : 0

pointer:0x7f5edea4dfd0  
SgFunctionParameterList  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L84R

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edde81488  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2044970  
Sg\_File\_Info\* p\_endOfConstruct : 0x20449c8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edea4dfd0  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgInitializedNamePtrList p\_args : [0x7f5ede420048, 0x7f5ede420190, 0x7f5ede4202d8, 0x7f5ede420420]

pointer:0x7f5ede420048  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede4df0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2044550  
Sg\_File\_Info\* p\_endOfConstruct : 0x20445a8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name :  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1cc90e0  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde81488  
SgStorageModifier\* p\_storageModifier : 0x1e5cc28  
SgScopeStatement\* p\_scope : 0x7f5ede463730  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede420190  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4dfd0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2044600  
Sg\_File\_Info\* p\_endOfConstruct : 0x2044658  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : begin  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde81488  
SgStorageModifier\* p\_storageModifier : 0x1e5cc50  
SgScopeStatement\* p\_scope : 0x7f5ede463730  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede4202d8  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4dfd0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20446b0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2044708  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : end  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde81488  
SgStorageModifier\* p\_storageModifier : 0x1e5cc78  
SgScopeStatement\* p\_scope : 0x7f5ede463730  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede420420  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4d0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2044760  
Sg\_File\_Info\* p\_endOfConstruct : 0x20447b8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : loop\_body  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1cc9560  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde81488  
SgStorageModifier\* p\_storageModifier : 0x1e5cca0  
SgScopeStatement\* p\_scope : 0x7f5ede463730  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visibility\_enum p\_gnu\_attribute\_visibility : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede463730  
SgFunctionDefinition  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edde81488  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2044810  
Sg\_File\_Info\* p\_endOfConstruct : 0x2044868  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869acb0  
SgTypeTable\* p\_type\_table : 0x15f6350  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgBasicBlock\* p\_body : 0x7f5ede4af3c0  
std::map<SgNode\*,int> p\_scope\_number\_list : []



pointer:0x7f5ede4af3c0  
SgBasicBlock  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede463730  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20444a0  
Sg\_File\_Info\* p\_endOfConstruct : 0x20444f8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869ab80  
SgTypeTable\* p\_type\_table : 0x15f6328  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1f45dd0, 0x7f5ede29f490, 0x7f5ede0df388, 0x1f45ef0]  
std::string p\_asm\_function\_body :

pointer:0x1f45dd0  
SgExprStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4af3c0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2044b28  
Sg\_File\_Info\* p\_endOfConstruct : 0x2044b80  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1e8f490

pointer:0x1e8f490  
SgNullExpression  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f45dd0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2044a78  
Sg\_File\_Info\* p\_endOfConstruct : 0x2044ad0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20448c0

pointer:0x7f5ede29f490  
SgPragmaDeclaration  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: pragma\_statement

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede4af3c0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2044c88  
Sg\_File\_Info\* p\_endOfConstruct : 0x2044ce0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5ede29f490  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede29f490  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgPragma\* p\_pragma : 0x1ec1500

pointer:0x1ec1500  
SgPragma

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SgNode\* p\_parent : 0x7f5ede29f490  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
std::string p\_name : omp parallel for schedule(static)  
Sg\_File\_Info\* p\_startOfConstruct : 0x2044918  
Sg\_File\_Info\* p\_endOfConstruct : 0x2044a20  
short p\_printed : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0

pointer:0x7f5ede0df388  
SgForStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4af3c0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2045f70  
Sg\_File\_Info\* p\_endOfConstruct : 0x2045fc8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869ade0  
SgTypeTable\* p\_type\_table : 0x15f6378  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgForInitStatement\* p\_for\_init\_stmt : 0x1f5e120  
SgStatement\* p\_test : 0x1f45e30  
SgExpression\* p\_increment : 0x1fae778  
SgStatement\* p\_loop\_body : 0x7f5ede4af4d8  
SgStatement\* p\_else\_body : 0  
std::string p\_string\_label :

pointer:0x1f5e120  
SgForInitStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede0df388  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2045158  
Sg\_File\_Info\* p\_endOfConstruct : 0x20451b0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgStatementPtrList p\_init\_stmt : [0x7f5ede591610]

pointer:0x7f5ede591610  
SgVariableDeclaration  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: \_variable\_declaration\_\_variable\_type\_L63R\_variable\_name\_L83R\_\_scope\_\_\_\_SgSS2\_\_\_\_scope\_\_\_\_SgSS

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SgNode\* p\_parent : 0x1f5e120  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2044e98  
Sg\_File\_Info\* p\_endOfConstruct : 0x2044ef0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 1  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5ede591610  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgDeclarationStatement\* p\_baseTypeDefiningDeclaration : 0  
SgInitializedNamePtrList p\_variables : [0x7f5ede420568]  
bool p\_variableDeclarationContainsBaseTypeDefiningDeclaration : 0  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresGlobalNameQualificationOnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
unsigned short p\_gnu\_extension\_initialization\_priority : 0  
SgDeclarationStatement::gnu\_extension\_visibility\_attribute\_enum p\_gnu\_extension\_visibility : 0  
SgVariableDeclaration::gnu\_extension\_declaration\_attributes\_enum p\_gnu\_extension\_declaration\_attribute : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_isAssociatedWithDeclarationList : 0  
bool p\_isFirstDeclarationOfDeclarationList : 1  
bool p\_is\_thread\_local : 0  
bool p\_is\_constexpr : 0



pointer:0x7f5ede420568  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede591610  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2044e40  
Sg\_File\_Info\* p\_endOfConstruct : 0x2044de8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : ii  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0x1f79de8  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5ede500b10  
SgStorageModifier\* p\_storageModifier : 0x1e5ccc8  
SgScopeStatement\* p\_scope : 0x7f5ede0df388  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 2  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x1f79de8  
SgAssignInitializer  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x7f5ede420568  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20450a8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2045050  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2044d90  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgExpression\* p\_operand\_i : 0x1d53c28  
SgType\* p\_expression\_type : 0

pointer:0x1d53c28  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:29  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1f79de8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2044fa0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2044ff8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2044d38  
SgVariableSymbol\* p\_symbol : 0x1841710  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1f45e30  
SgExprStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede0df388  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2045520  
Sg\_File\_Info\* p\_endOfConstruct : 0x2045578  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1f93200

pointer:0x1f93200  
SgLessThanOp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:40  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: bool

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SgNode\* p\_parent : 0x1f45e30  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2045470  
Sg\_File\_Info\* p\_endOfConstruct : 0x20454c8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2045208  
SgExpression\* p\_lhs\_operand\_i : 0x1d53c90  
SgExpression\* p\_rhs\_operand\_i : 0x1d53cf8  
SgType\* p\_expression\_type : 0  
SgExpression\* p\_originalExpressionTree : 0

pointer:0x1d53c90  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:37  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1f93200  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2045260  
Sg\_File\_Info\* p\_endOfConstruct : 0x20452b8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2045100  
SgVariableSymbol\* p\_symbol : 0x18417a0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d53cf8  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:42  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1f93200  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2045368  
Sg\_File\_Info\* p\_endOfConstruct : 0x20453c0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2044f48  
SgVariableSymbol\* p\_symbol : 0x1841740  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1fae778  
SgPlusPlusOp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:48  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x7f5ede0df388  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2045730  
Sg\_File\_Info\* p\_endOfConstruct : 0x2045788  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2045310  
SgExpression\* p\_operand\_i : 0x1d53d60  
SgType\* p\_expression\_type : 0  
SgUnaryOp::Sgop\_mode p\_mode : 0



pointer:0x1d53d60  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 43:50  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1fae778  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2045628  
Sg\_File\_Info\* p\_endOfConstruct : 0x2045680  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 1  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2045418  
SgVariableSymbol\* p\_symbol : 0x18417a0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x7f5ede4af4d8  
SgBasicBlock  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede0df388  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20457e0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2045838  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869af10  
SgTypeTable\* p\_type\_table : 0x15f63a0  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1f45e90]  
std::string p\_asm\_function\_body :

pointer:0x1f45e90  
SgExprStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4af4d8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2045ec0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2045f18  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1d85f60

pointer:0x1d85f60  
SgFunctionCallExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 44:18  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void

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SgNode\* p\_parent : 0x1f45e90  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2045e10  
Sg\_File\_Info\* p\_endOfConstruct : 0x2045e68  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2045ba8  
SgExpression\* p\_function : 0x2186ec0  
SgExprListExp\* p\_args : 0x1d6ca58  
SgType\* p\_expression\_type : 0x7f5edde0e0b0  
bool p\_uses\_operator\_syntax : 1

pointer:0x2186ec0  
SgDotExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: void(int )

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SgNode\* p\_parent : 0x1d85f60  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2045d08  
Sg\_File\_Info\* p\_endOfConstruct : 0x2045d60  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2045aa0  
SgExpression\* p\_lhs\_operand\_i : 0x1d53dc8  
SgExpression\* p\_rhs\_operand\_i : 0x21699f8  
SgType\* p\_expression\_type : 0  
SgExpression\* p\_originalExpressionTree : 0

pointer:0x1d53dc8  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 44:9  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: class

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SgNode\* p\_parent : 0x2186ec0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20459f0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2045a48  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2045890  
SgVariableSymbol\* p\_symbol : 0x1841770  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x21699f8  
SgMemberFunctionRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 44:18  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: void(int )

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SgNode\* p\_parent : 0x2186ec0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20458e8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2045940  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20456d8  
SgMemberFunctionSymbol\* p\_symbol\_i : 0x20bc0c0  
int p\_virtual\_call : 0  
SgFunctionType\* p\_function\_type : 0  
int p\_need\_qualifier : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6ca58  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

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SgNode\* p\_parent : 0x1d85f60  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2045c00  
Sg\_File\_Info\* p\_endOfConstruct : 0x2045c58  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20455d0  
SgExpressionPtrList p\_expressions : [0x1d53e30]



pointer:0x1d53e30  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 44:20  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d6ca58  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2045af8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2045b50  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 1  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2045998  
SgVariableSymbol\* p\_symbol : 0x18417a0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1f45ef0  
SgExprStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede4af3c0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046128  
Sg\_File\_Info\* p\_endOfConstruct : 0x2046180  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1e8f4e0

pointer:0x1e8f4e0  
SgNullExpression  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f45ef0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046078  
Sg\_File\_Info\* p\_endOfConstruct : 0x20460d0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2045cb0

pointer:0x7f5edde818a0  
SgTemplateInstantiationFunctionDecl  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L79R

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ee8565120  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2045db8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2046020  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5edde818a0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edde80428  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : forall < >  
SgFunctionParameterList\* p\_parameterList : 0x7f5edea4e220  
SgFunctionModifier p\_functionModifier : <too long>: <too long>: SgFunctionModifier(isUnknown() = false isDefault() = true isInline()  
SgSpecialFunctionModifier p\_specialFunctionModifier : <too long>: <too long>: SgSpecialFunctionModifier(isUnknown() = false isDefault()  
SgTypePtrList p\_exceptionSpecification : []  
bool p\_named\_in\_end\_statement : 0  
std::string p\_asm\_name :  
SgExprListExp\* p\_decoratorList : 0  
SgFunctionType\* p\_type : 0x7f5ede989c50  
SgFunctionDefinition\* p\_definition : 0x7f5ede463860  
bool p\_oldStyleDefinition : 0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresNameQualificationOnReturnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
SgDeclarationStatement::gnu\_extension\_visability\_attribute\_enum p\_gnu\_extension\_visability : 1  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
int p\_name\_qualification\_length\_for\_return\_type : 0  
bool p\_type\_elaboration\_required\_for\_return\_type : 0  
bool p\_global\_qualification\_required\_for\_return\_type : 0  
bool p\_prototypelsWithoutParameters : 0  
int p\_gnu\_regparm\_attribute : -1  
SgFunctionType\* p\_type\_syntax : 0  
bool p\_type\_syntax\_is\_available : 0  
bool p\_using\_C11\_Noreturn\_keyword : 0  
bool p\_is\_constexpr : 0  
bool p\_using\_new\_function\_return\_type\_syntax : 0  
SgFunctionParameterScope\* p\_functionParameterScope : 0  
SgName p\_templateName : forall  
SgTemplateFunctionDeclaration\* p\_templateDeclaration : 0x7f5ede174900  
SgTemplateArgumentPtrList p\_templateArguments : [0x1eeaa50]  
bool p\_nameResetFromMangledForm : 1  
bool p\_template\_argument\_list\_is\_explicit : 0

pointer:0x7f5edea4e220  
SgFunctionParameterList  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L80R

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edde818a0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20466a8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2046700  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edea4e220  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgInitializedNamePtrList p\_args : [0x7f5ede4206b0, 0x7f5ede4207f8, 0x7f5ede420940, 0x7f5ede420a88]

pointer:0x7f5ede4206b0  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edea4e220  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046288  
Sg\_File\_Info\* p\_endOfConstruct : 0x20462e0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name :  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1cc94e0  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde818a0  
SgStorageModifier\* p\_storageModifier : 0x1e5ccf0  
SgScopeStatement\* p\_scope : 0x7f5ede463860  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede4207f8  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edea4e220  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046338  
Sg\_File\_Info\* p\_endOfConstruct : 0x2046390  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : begin  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde818a0  
SgStorageModifier\* p\_storageModifier : 0x1e5cd18  
SgScopeStatement\* p\_scope : 0x7f5ede463860  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede420940  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5edea4e220  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20463e8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2046440  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : end  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde818a0  
SgStorageModifier\* p\_storageModifier : 0x1e5cd40  
SgScopeStatement\* p\_scope : 0x7f5ede463860  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0



pointer:0x7f5ede420a88  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4e220  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046498  
Sg\_File\_Info\* p\_endOfConstruct : 0x20464f0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : loop\_body  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1cc9560  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde818a0  
SgStorageModifier\* p\_storageModifier : 0x1e5cd68  
SgScopeStatement\* p\_scope : 0x7f5ede463860  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede463860  
SgFunctionDefinition  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edde818a0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046548  
Sg\_File\_Info\* p\_endOfConstruct : 0x20465a0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869b170  
SgTypeTable\* p\_type\_table : 0x15f63f0  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgBasicBlock\* p\_body : 0x7f5ede4af5f0  
std::map<SgNode\*,int> p\_scope\_number\_list : []

pointer:0x7f5ede4af5f0  
SgBasicBlock  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede463860  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20461d8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2046230  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869b040  
SgTypeTable\* p\_type\_table : 0x15f63c8  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x7f5eddf80128]  
std::string p\_asm\_function\_body :

pointer:0x7f5eddf80128  
SgSwitchStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4af5f0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048858  
Sg\_File\_Info\* p\_endOfConstruct : 0x20482d8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869b2a0  
SgTypeTable\* p\_type\_table : 0x15f6418  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatement\* p\_item\_selector : 0x1f45f50  
SgStatement\* p\_body : 0x7f5ede4af708  
SgLabelRefExp\* p\_end\_numeric\_label : 0  
std::string p\_string\_label :

pointer:0x1f45f50  
SgExprStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5eddf80128  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046cd8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2046d30  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1d1b218

pointer:0x1d1b218  
SgCastExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f45f50  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046c28  
Sg\_File\_Info\* p\_endOfConstruct : 0x2046c80  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20469c0  
SgExpression\* p\_operand\_i : 0x1d85fd0  
SgType\* p\_expression\_type : 0x1ab2e60  
SgUnaryOp::Sgop\_mode p\_mode : 0  
SgCastExp::cast\_type\_enum p\_cast\_type : 2  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_castContainsBaseTypeDefiningDeclaration : 0

pointer:0x1d85fd0  
SgFunctionCallExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 103:39  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::switcher::POLICY\_TYPE

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SgNode\* p\_parent : 0x1d1b218  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046b20  
Sg\_File\_Info\* p\_endOfConstruct : 0x2046b78  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20468b8  
SgExpression\* p\_function : 0x1d37a90  
SgExprListExp\* p\_args : 0x1d6cac0  
SgType\* p\_expression\_type : 0x7f5ede989aa0  
bool p\_uses\_operator\_syntax : 0

pointer:0x1d37a90  
SgFunctionRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 103:14  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: enum ::RAJA::switcher::POLICY\_TYPE()

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d85fd0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046910  
Sg\_File\_Info\* p\_endOfConstruct : 0x2046968  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2046860  
SgFunctionSymbol\* p\_symbol\_i : 0x1898eb0  
SgFunctionType\* p\_function\_type : 0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0



pointer:0x1d6cac0  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d85fd0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046a18  
Sg\_File\_Info\* p\_endOfConstruct : 0x2046a70  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2046808  
SgExpressionPtrList p\_expressions : []

pointer:0x7f5ede4af708  
SgBasicBlock  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5eddf80128  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046ac8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2046bd0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869b3d0  
SgTypeTable\* p\_type\_table : 0x15f6440  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x2069c90, 0x2069d08]  
std::string p\_asm\_function\_body :

pointer:0x2069c90  
SgCaseOptionStmt  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ede4af708  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2047bf8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2047c50  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_key : 0x1d1b290  
SgStatement\* p\_body : 0x7f5ede4af820  
SgExpression\* p\_key\_range\_end : 0  
std::string p\_case\_construct\_name :

pointer:0x1d1b290  
SgCastExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x2069c90  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2047b48  
Sg\_File\_Info\* p\_endOfConstruct : 0x2047ba0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2047a40  
SgExpression\* p\_operand\_i : 0x7f5ede010470  
SgType\* p\_expression\_type : 0x1ab2e60  
SgUnaryOp::Sgop\_mode p\_mode : 0  
SgCastExp::cast\_type\_enum p\_cast\_type : 2  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_castContainsBaseTypeDefiningDeclaration : 0

pointer:0x7f5ede010470  
SgEnumVal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 104:14  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d1b290  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20479e8  
Sg\_File\_Info\* p\_endOfConstruct : 0x20478e0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2047a98  
SgExpression\* p\_originalExpressionTree : 0  
int p\_value : 0  
SgEnumDeclaration\* p\_declaration : 0x7f5ede038010  
SgName p\_name : seq\_exec  
bool p\_requiresNameQualification : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x7f5ede4af820  
SgBasicBlock  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1

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SgNode\* p\_parent : 0x2069c90  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2047728  
Sg\_File\_Info\* p\_endOfConstruct : 0x2047780  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869b500  
SgTypeTable\* p\_type\_table : 0x15f6468  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1f45fb0, 0x2052360]  
std::string p\_asm\_function\_body :

pointer:0x1f45fb0  
SgExprStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4af820  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20475c8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2047620  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1d86040

pointer:0x1d86040  
SgFunctionCallExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 105:23  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void

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SgNode\* p\_parent : 0x1f45fb0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2047518  
Sg\_File\_Info\* p\_endOfConstruct : 0x2047570  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20472b0  
SgExpression\* p\_function : 0x1d37b00  
SgExprListExp\* p\_args : 0x1d6cb90  
SgType\* p\_expression\_type : 0x7f5ede989ce0  
bool p\_uses\_operator\_syntax : 0



pointer:0x1d37b00  
SgFunctionRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 105:11  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void(struct ::RAJA::seq\_exec, ::RAJA::Index\_type, ::RAJA::Index\_type, class )

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SgNode\* p\_parent : 0x1d86040  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046de0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2046e38  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2046758  
SgFunctionSymbol\* p\_symbol\_i : 0x1898f70  
SgFunctionType\* p\_function\_type : 0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6cb90  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

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SgNode\* p\_parent : 0x1d86040  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2047410  
Sg\_File\_Info\* p\_endOfConstruct : 0x2047468  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20471a8  
SgExpressionPtrList p\_expressions : [0x1f264a0, 0x1d53e98, 0x1d53f00, 0x1d53f68]

pointer:0x1f264a0  
SgConstructorInitializer  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 105:25  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: struct ::RAJA::seq\_exec

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SgNode\* p\_parent : 0x1d6cb90  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046f98  
Sg\_File\_Info\* p\_endOfConstruct : 0x2046ee8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2047048  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgMemberFunctionDeclaration\* p\_declaration : 0  
SgExprListExp\* p\_args : 0x1d6cb28  
SgType\* p\_expression\_type : 0x1cc9460  
bool p\_need\_name : 1  
bool p\_need\_qualifier : 0  
bool p\_need\_parenthesis\_after\_name : 1  
bool p\_associated\_class\_unknown : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6cb28  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

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SgNode\* p\_parent : 0x1f264a0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046e90  
Sg\_File\_Info\* p\_endOfConstruct : 0x2046d88  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2046f40  
SgExpressionPtrList p\_expressions : []

pointer:0x1d53e98  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 105:43  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1d6cb90  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20470f8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2047150  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2046ff0  
SgVariableSymbol\* p\_symbol : 0x1841800  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d53f00  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 105:50  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1d6cb90  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2047200  
Sg\_File\_Info\* p\_endOfConstruct : 0x2047258  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20467b0  
SgVariableSymbol\* p\_symbol : 0x1841830  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d53f68  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 105:55  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: class

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SgNode\* p\_parent : 0x1d6cb90  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2047308  
Sg\_File\_Info\* p\_endOfConstruct : 0x2047360  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20470a0  
SgVariableSymbol\* p\_symbol : 0x1841860  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x2052360  
SgBreakStmt  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4af820  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2047678  
Sg\_File\_Info\* p\_endOfConstruct : 0x20476d0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
std::string p\_do\_string\_label :



pointer:0x2069d08  
SgCaseOptionStmt  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4af708  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048b18  
Sg\_File\_Info\* p\_endOfConstruct : 0x2048b70  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_key : 0x1d1b308  
SgStatement\* p\_body : 0x7f5ede4af938  
SgExpression\* p\_key\_range\_end : 0  
std::string p\_case\_construct\_name :

pointer:0x1d1b308  
SgCastExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x2069d08  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048a68  
Sg\_File\_Info\* p\_endOfConstruct : 0x2048ac0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2048960  
SgExpression\* p\_operand\_i : 0x7f5ede010510  
SgType\* p\_expression\_type : 0x1ab2e60  
SgUnaryOp::Sgop\_mode p\_mode : 0  
SgCastExp::cast\_type\_enum p\_cast\_type : 2  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
bool p\_castContainsBaseTypeDefiningDeclaration : 0

pointer:0x7f5ede010510  
SgEnumVal  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 106:14  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d1b308  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048908  
Sg\_File\_Info\* p\_endOfConstruct : 0x2048800  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20489b8  
SgExpression\* p\_originalExpressionTree : 0  
int p\_value : 1  
SgEnumDeclaration\* p\_declaration : 0x7f5ede038010  
SgName p\_name : omp\_parallel\_for\_exec  
bool p\_requiresNameQualification : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x7f5ede4af938  
SgBasicBlock  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1

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SgNode\* p\_parent : 0x2069d08  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048648  
Sg\_File\_Info\* p\_endOfConstruct : 0x20486a0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869b630  
SgTypeTable\* p\_type\_table : 0x15f6490  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1f46010, 0x20523c0]  
std::string p\_asm\_function\_body :

pointer:0x1f46010  
SgExprStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4af938  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20484e8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2048540  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1d860b0

pointer:0x1d860b0  
SgFunctionCallExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 107:23  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f46010  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048438  
Sg\_File\_Info\* p\_endOfConstruct : 0x2048490  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20481d0  
SgExpression\* p\_function : 0x1d37b70  
SgExprListExp\* p\_args : 0x1d6cc60  
SgType\* p\_expression\_type : 0x7f5ede989d70  
bool p\_uses\_operator\_syntax : 0

pointer:0x1d37b70  
SgFunctionRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 107:11  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void(struct ::RAJA::omp\_parallel\_for\_exec, ::RAJA::Index\_type, ::RAJA::Index\_type, class )

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d860b0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2047d00  
Sg\_File\_Info\* p\_endOfConstruct : 0x2047d58  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20473b8  
SgFunctionSymbol\* p\_symbol\_i : 0x1898fa0  
SgFunctionType\* p\_function\_type : 0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6cc60  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1d860b0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048330  
Sg\_File\_Info\* p\_endOfConstruct : 0x2048388  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20480c8  
SgExpressionPtrList p\_expressions : [0x1f26520, 0x1d53fd0, 0x1d54038, 0x1d540a0]



pointer:0x1f26520  
SgConstructorInitializer  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 107:25  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: struct ::RAJA::omp\_parallel\_for\_exec

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SgNode\* p\_parent : 0x1d6cc60  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2047eb8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2047e08  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2047f68  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgMemberFunctionDeclaration\* p\_declaration : 0  
SgExprListExp\* p\_args : 0x1d6cbf8  
SgType\* p\_expression\_type : 0x1cc90e0  
bool p\_need\_name : 1  
bool p\_need\_qualifier : 0  
bool p\_need\_parenthesis\_after\_name : 1  
bool p\_associated\_class\_unknown : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6cbf8  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x1f26520  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2047db0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2047ca8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2047e60  
SgExpressionPtrList p\_expressions : []

pointer:0x1d53fd0  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 107:56  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1d6cc60  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048018  
Sg\_File\_Info\* p\_endOfConstruct : 0x2048070  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2047f10  
SgVariableSymbol\* p\_symbol : 0x1841800  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d54038  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 107:63  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1d6cc60  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048120  
Sg\_File\_Info\* p\_endOfConstruct : 0x2048178  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2047938  
SgVariableSymbol\* p\_symbol : 0x1841830  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d540a0  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 107:68  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: class

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SgNode\* p\_parent : 0x1d6cc60  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048228  
Sg\_File\_Info\* p\_endOfConstruct : 0x2048280  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2047fc0  
SgVariableSymbol\* p\_symbol : 0x1841860  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x20523c0  
SgBreakStmt  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4af938  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048598  
Sg\_File\_Info\* p\_endOfConstruct : 0x20485f0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
std::string p\_do\_string\_label :

pointer:0x7f5edde81cb8  
SgTemplateInstantiationFunctionDecl  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L74R

[Click here to go to the parent node](#)

SgNode\* p\_parent : 0x7f5ee8565120  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2046650  
Sg\_File\_Info\* p\_endOfConstruct : 0x20465f8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = false isFrie  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0x7f5edde81cb8  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edde80010  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgName p\_name : forall < switcher\_exec , >  
SgFunctionParameterList\* p\_parameterList : 0x7f5edea4e470  
SgFunctionModifier p\_functionModifier : <too long>: <too long>: SgFunctionModifier(isUnknown() = false isDefault() = true isInline()  
SgSpecialFunctionModifier p\_specialFunctionModifier : <too long>: <too long>: SgSpecialFunctionModifier(isUnknown() = false isDefault()  
SgTypePtrList p\_exceptionSpecification : []  
bool p\_named\_in\_end\_statement : 0  
std::string p\_asm\_name :  
SgExprListExp\* p\_decoratorList : 0  
SgFunctionType\* p\_type : 0x7f5ede989bc0  
SgFunctionDefinition\* p\_definition : 0x7f5ede463990  
bool p\_oldStyleDefinition : 0  
SgScopeStatement\* p\_scope : 0x7f5ede3c5010  
SgDeclarationStatement::template\_specialization\_enum p\_specialization : 1  
bool p\_requiresNameQualificationOnReturnType : 0  
std::string p\_gnu\_extension\_section :  
std::string p\_gnu\_extension\_alias :  
SgDeclarationStatement::gnu\_extension\_visability\_attribute\_enum p\_gnu\_extension\_visability : 1  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0  
int p\_name\_qualification\_length\_for\_return\_type : 0  
bool p\_type\_elaboration\_required\_for\_return\_type : 0  
bool p\_global\_qualification\_required\_for\_return\_type : 0  
bool p\_prototypelsWithoutParameters : 0  
int p\_gnu\_regparm\_attribute : -1  
SgFunctionType\* p\_type\_syntax : 0  
bool p\_type\_syntax\_is\_available : 0  
bool p\_using\_C11\_Noreturn\_keyword : 0  
bool p\_is\_constexpr : 0  
bool p\_using\_new\_function\_return\_type\_syntax : 0  
SgFunctionParameterScope\* p\_functionParameterScope : 0  
SgName p\_templateName : forall  
SgTemplateFunctionDeclaration\* p\_templateDeclaration : 0x7f5ede173010  
SgTemplateArgumentPtrList p\_templateArguments : [0x1eea990, 0x1eea9f0]  
bool p\_nameResetFromMangledForm : 1  
bool p\_template\_argument\_list\_is\_explicit : 1

pointer:0x7f5edea4e470  
SgFunctionParameterList  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Declaration mangled name: L75R

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SgNode\* p\_parent : 0x7f5edde81cb8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048fe8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2049040  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
unsigned int p\_decl\_attributes : 0  
std::string p\_linkage :  
SgDeclarationModifier p\_declarationModifier : <too long>: <too long>: SgDeclarationModifier(isUnknown() = false isDefault() = true isFrien  
bool p\_nameOnly : 0  
bool p\_forward : 0  
bool p\_externBrace : 0  
bool p\_skipElaborateType : 0  
SgDeclarationStatement\* p\_definingDeclaration : 0  
SgDeclarationStatement\* p\_firstNondefiningDeclaration : 0x7f5edea4e470  
SgQualifiedNamePtrList p\_qualifiedNameList : []  
std::string p\_binding\_label :  
SgInitializedNamePtrList p\_args : [0x7f5ede420bd0, 0x7f5ede420d18, 0x7f5ede420e60]



pointer:0x7f5ede420bd0  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4e470  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048c78  
Sg\_File\_Info\* p\_endOfConstruct : 0x2048cd0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : begin  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde81cb8  
SgStorageModifier\* p\_storageModifier : 0x1e5cd90  
SgScopeStatement\* p\_scope : 0x7f5ede463990  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede420d18  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4e470  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048d28  
Sg\_File\_Info\* p\_endOfConstruct : 0x2048d80  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : end  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x7f5ede77e498  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde81cb8  
SgStorageModifier\* p\_storageModifier : 0x1e5cdb8  
SgScopeStatement\* p\_scope : 0x7f5ede463990  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede420e60  
SgInitializedName  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edea4e470  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048dd8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2048e30  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgName p\_name : loop\_body  
std::string p\_microsoft\_uuid\_string :  
SgType\* p\_typeptr : 0x1cc9560  
SgInitializer\* p\_initptr : 0  
SgInitializedName\* p\_prev\_decl\_item : 0  
bool p\_is\_initializer : 1  
SgDeclarationStatement\* p\_declptr : 0x7f5edde81cb8  
SgStorageModifier\* p\_storageModifier : 0x1e5cde0  
SgScopeStatement\* p\_scope : 0x7f5ede463990  
SgInitializedName::preinitialization\_enum p\_preinitialization : 0  
bool p\_isCoArray : 0  
SgInitializedName::asm\_register\_name\_enum p\_register\_name\_code : 0  
SgInitializedName::excess\_specifier\_enum p\_excess\_specifier : 0  
std::string p\_register\_name\_string :  
bool p\_requiresGlobalNameQualificationOnType : 0  
bool p\_shapeDeferred : 0  
bool p\_initializationDeferred : 0  
SgBitVector p\_gnu\_attribute\_modifierVector : [F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F, F]  
unsigned long int p\_gnu\_attribute\_initialization\_priority : 0  
std::string p\_gnu\_attribute\_named\_weak\_reference :  
std::string p\_gnu\_attribute\_named\_alias :  
std::string p\_gnu\_attribute\_cleanup\_function :  
std::string p\_gnu\_attribute\_section\_name :  
int p\_gnu\_attribute\_alignment : -1  
SgDeclarationModifier::gnu\_declaration\_visability\_enum p\_gnu\_attribute\_visability : 0  
bool p\_protected\_declaration : 0  
int p\_name\_qualification\_length\_for\_type : 0  
bool p\_type\_elaboration\_required\_for\_type : 0  
bool p\_global\_qualification\_required\_for\_type : 0  
bool p\_hasArrayTypeWithEmptyBracketSyntax : 0  
bool p\_using\_C11\_Alignas\_keyword : 0  
SgNode\* p\_constant\_or\_type\_argument\_for\_Alignas\_keyword : 0  
bool p\_using\_auto\_keyword : 0  
bool p\_using\_device\_keyword : 0

pointer:0x7f5ede463990  
SgFunctionDefinition  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5edde81cb8  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048e88  
Sg\_File\_Info\* p\_endOfConstruct : 0x2048ee0  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869b890  
SgTypeTable\* p\_type\_table : 0x15f64e0  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgBasicBlock\* p\_body : 0x7f5ede4afa50  
std::map<SgNode\*,int> p\_scope\_number\_list : []

pointer:0x7f5ede4afa50  
SgBasicBlock  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede463990  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2048bc8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2048c20  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgSymbolTable\* p\_symbol\_table : 0x7f5ee869b760  
SgTypeTable\* p\_type\_table : 0x15f64b8  
std::set<SgSymbol\*> p\_type\_elaboration\_list : []  
std::set<SgSymbol\*> p\_hidden\_type\_list : []  
std::set<SgSymbol\*> p\_hidden\_declaration\_list : []  
SgStatementPtrList p\_statements : [0x1f46070]  
std::string p\_asm\_function\_body :

pointer:0x1f46070  
SgExprStatement  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:0

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SgNode\* p\_parent : 0x7f5ede4afa50  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xffffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20498d8  
Sg\_File\_Info\* p\_endOfConstruct : 0x2049930  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
SgLabelRefExp\* p\_numeric\_label : 0  
int p\_source\_sequence\_value : -1  
SgExpression\* p\_expression : 0x1d86120

pointer:0x1d86120  
SgFunctionCallExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 28:22  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void

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SgNode\* p\_parent : 0x1f46070  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2049828  
Sg\_File\_Info\* p\_endOfConstruct : 0x2049880  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20495c0  
SgExpression\* p\_function : 0x1d37be0  
SgExprListExp\* p\_args : 0x1d6cd30  
SgType\* p\_expression\_type : 0x7f5ede989c50  
bool p\_uses\_operator\_syntax : 0

pointer:0x1d37be0  
SgFunctionRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 28:16  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: void(struct ::RAJA::switcher\_exec, ::RAJA::Index\_type, ::RAJA::Index\_type, class )

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SgNode\* p\_parent : 0x1d86120  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20490f0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2049148  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2048f38  
SgFunctionSymbol\* p\_symbol\_i : 0x1898f40  
SgFunctionType\* p\_function\_type : 0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0



pointer:0x1d6cd30  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

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SgNode\* p\_parent : 0x1d86120  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2049720  
Sg\_File\_Info\* p\_endOfConstruct : 0x2049778  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20494b8  
SgExpressionPtrList p\_expressions : [0x1f265a0, 0x1d54108, 0x1d54170, 0x1d541d8]

pointer:0x1f265a0  
SgConstructorInitializer  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 28:24  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: struct ::RAJA::switcher\_exec

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SgNode\* p\_parent : 0x1d6cd30  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20492a8  
Sg\_File\_Info\* p\_endOfConstruct : 0x20491f8  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2049358  
bool p\_is\_explicit\_cast : 1  
bool p\_is\_braced\_initialized : 0  
SgMemberFunctionDeclaration\* p\_declaration : 0  
SgExprListExp\* p\_args : 0x1d6ccc8  
SgType\* p\_expression\_type : 0x1cc94e0  
bool p\_need\_name : 1  
bool p\_need\_qualifier : 0  
bool p\_need\_parenthesis\_after\_name : 1  
bool p\_associated\_class\_unknown : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d6ccc8  
SgExprListExp  
compilerGenerated 0:0  
IsTransformation:0  
IsOutputInCodeGeneration:1  
Expression type: int

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SgNode\* p\_parent : 0x1f265a0  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x20491a0  
Sg\_File\_Info\* p\_endOfConstruct : 0x2049098  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2049250  
SgExpressionPtrList p\_expressions : []

pointer:0x1d54108  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 29:20  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1d6cd30  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2049408  
Sg\_File\_Info\* p\_endOfConstruct : 0x2049460  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2049300  
SgVariableSymbol\* p\_symbol : 0x1841890  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d54170  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 29:27  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: ::RAJA::Index\_type

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SgNode\* p\_parent : 0x1d6cd30  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2049510  
Sg\_File\_Info\* p\_endOfConstruct : 0x2049568  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x2048f90  
SgVariableSymbol\* p\_symbol : 0x18418c0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

pointer:0x1d541d8  
SgVarRefExp  
/home/liao6/workspace/raja/example/raja-matmul-example/xgen-translator/test2.cpp 30:20  
IsTransformation:0  
IsOutputInCodeGeneration:0  
Expression type: class

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SgNode\* p\_parent : 0x1d6cd30  
bool p\_isModified : 0  
bool p\_containsTransformation : 0  
\$CLASSNAME\* p\_freepointer : 0xfffffffffffff  
Sg\_File\_Info\* p\_startOfConstruct : 0x2049618  
Sg\_File\_Info\* p\_endOfConstruct : 0x2049670  
AttachedPreprocessingInfoType\* p\_attachedPreprocessingInfoPtr : 0  
AstAttributeMechanism\* p\_attributeMechanism : 0  
bool p\_containsTransformationToSurroundingWhitespace : 0  
bool p\_need\_paren : 0  
bool p\_lvalue : 0  
bool p\_global\_qualified\_name : 0  
Sg\_File\_Info\* p\_operatorPosition : 0x20493b0  
SgVariableSymbol\* p\_symbol : 0x18418f0  
SgExpression\* p\_originalExpressionTree : 0  
int p\_name\_qualification\_length : 0  
bool p\_type\_elaboration\_required : 0  
bool p\_global\_qualification\_required : 0

