```
pointer:0x7fb8efd44010
SgSourceFile
```

root node

```
SgNode* p_parent : 0x20ec2f0
bool p isModified: 0
bool p_containsTransformation: 0
Sq File Info* p startOfConstruct: 0x7fb8efef7068
SgStringList p_originalCommandLineArgumentList : [pdfGenerator, -c, subroutine1.f]
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: 0
bool p_C11_only: 0
bool p_C11_gnu_only: 0
bool p_Cxx0x_only: 0
bool p_Cxx11_only: 0
bool p_Cxx11_gnu_only: 0
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: 1
bool p_F77_only: 1
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:1
SgFile::outputFormatOption_enum p_outputFormat : 1
SgFile::outputFormatOption_enum p_backendCompileFormat : 1
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:0x7fb8efe72120 SgGlobal /home/liao6/workspace/github/rose-ast.git/subroutine1.f 1:0 IsTransformation:0 IsOutputInCodeGeneration:0

```
SgNode* p_parent : 0x7fb8efd44010
bool p_isModified: 1
bool p_containsTransformation: 0
Sg_File_Info* p_startOfConstruct : 0x7fb8efef70c0
Sg_File_Info* p_endOfConstruct : 0x7fb8efef7118
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr: 0
AstAttributeMechanism* p_attributeMechanism: 0
bool p_containsTransformationToSurroundingWhitespace: 0
SgLabelRefExp* p_numeric_label: 0
int p_source_sequence_value: 0
SgSymbolTable* p_symbol_table: 0x7fb8efe27140
SgTypeTable* p_type_table: 0x2126d38
std::set<SgSymbol*> p_type_elaboration_list : []
std::set<SgSymbol*> p_hidden_type_list : []
std::set<SgSymbol*> p_hidden_declaration_list : []
SgDeclarationStatementPtrList p_declarations : [0x7fb81fe1b010]
```

```
SgProcedureHeaderStatement
/home/liao6/workspace/github/rose-ast.git/subroutine1.f 1:6
IsTransformation:0
IsOutputInCodeGeneration:0
Declaration mangled name: OUT__1_11773____Fb_v_Gb___Fe___L0R
  Click here to go to the parent node
SgNode* p_parent : 0x7fb8efe72120
bool p_isModified: 1
bool p_containsTransformation: 0
Sg_File_Info* p_startOfConstruct : 0x7fb8efef7170
Sg_File_Info* p_endOfConstruct : 0x7fb8efef71c8
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: 0x7fb81fe1b010
SgDeclarationStatement* p_firstNondefiningDeclaration: 0
SgQualifiedNamePtrList p_qualifiedNameList : []
std::string p_binding_label:
SgName p_name : OUT__1__11773_
SgFunctionParameterList* p_parameterList : 0x7fb81fcf9010
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 : 0x327a0c0
SgFunctionDefinition* p_definition: 0x339f080
bool p oldStyleDefinition: 0
SgScopeStatement* p_scope : 0x7fb8efe72120
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_prototypeIsWithoutParameters: 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
bool p_marked_as_edg_normalization: 0
SgProcedureHeaderStatement::subprogram_kind_enum p_subprogram_kind: 2
SgLabelRefExp* p_end_numeric_label: 0
SgInitializedName* p_result_name: 0x346e4f8
```

pointer:0x7fb81fe1b010

pointer:0x7fb81fcf9010 SgFunctionParameterList /home/liao6/workspace/github/rose-ast.git/subroutine1.f 1:6 IsTransformation:0 IsOutputInCodeGeneration:0 Declaration mangled name: L0R

SgInitializedNamePtrList p_args: [0x346e120, 0x346e268, 0x346e3b0]

```
SgNode* p_parent : 0x7fb81fe1b010
bool p_isModified: 1
bool p_containsTransformation: 0
Sg_File_Info* p_startOfConstruct : 0x7fb8efef7220
Sg_File_Info* p_endOfConstruct : 0x7fb8efef7278
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr: 0
AstAttributeMechanism* p_attributeMechanism: 0
bool p containsTransformationToSurroundingWhitespace: 0
SgLabelRefExp* p_numeric_label: 0
int p_source_sequence_value: 2
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 : 0x7fb81fcf9010
SgQualifiedNamePtrList p_qualifiedNameList : []
std::string p_binding_label:
```

```
pointer:0x346e120
SgInitializedName
/home/liao6/workspace/github/rose-ast.git/subroutine1.f 2:17
IsTransformation:0
IsOutputInCodeGeneration:0
```

```
SqNode* p parent: 0x7fb81fbb8010
bool p isModified: 0
bool p containsTransformation: 0
Sg File Info* p startOfConstruct: 0x7fb8efef76f0
Sg_File_Info* p_endOfConstruct : 0x7fb8efef7748
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr : 0
AstAttributeMechanism* p attributeMechanism: 0
bool p containsTransformationToSurroundingWhitespace: 0
SqName p name: N
std::string p_microsoft_uuid_string :
SgType* p_typeptr : 0x3433790
SgInitializer* p initptr: 0
SgInitializedName* p_prev_decl_item: 0x346e120
bool p is initializer: 1
SgDeclarationStatement* p_declptr : 0x7fb81fa9a010
SgStorageModifier* p_storageModifier : 0x350e3b0
SgScopeStatement* p_scope : 0x339f080
SgInitializedName::preinitialization_enum p_preinitialization: 0
bool p isCoArray: 0
SqInitializedName::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
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
SqDeclarationModifier::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
bool p is braced initialized: 0
```

```
pointer:0x346e268
SgInitializedName
/home/liao6/workspace/github/rose-ast.git/subroutine1.f 3:40
IsTransformation:0
IsOutputInCodeGeneration:0
```

```
SqNode* p parent: 0x7fb81fbb82a0
bool p isModified: 0
bool p containsTransformation: 0
Sg File Info* p startOfConstruct: 0x7fb8efef7c18
Sg_File_Info* p_endOfConstruct : 0x7fb8efef7c70
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr : 0
AstAttributeMechanism* p_attributeMechanism: 0
bool p containsTransformationToSurroundingWhitespace: 0
SqName p name: array
std::string p_microsoft_uuid_string :
SgType* p_typeptr : 0x3666030
SgInitializer* p initptr: 0
SgInitializedName* p_prev_decl_item: 0x346e268
bool p is initializer: 1
SgDeclarationStatement* p_declptr : 0x7fb81fa9a258
SgStorageModifier* p_storageModifier : 0x350e3d8
SgScopeStatement* p_scope : 0x339f080
SgInitializedName::preinitialization_enum p_preinitialization: 0
bool p isCoArray: 0
SqInitializedName::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
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
SqDeclarationModifier::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
bool p is braced initialized: 0
```

```
pointer:0x346e3b0
SgInitializedName
/home/liao6/workspace/github/rose-ast.git/subroutine1.f 4:17
IsTransformation:0
IsOutputInCodeGeneration:0
```

```
SqNode* p parent: 0x7fb81fbb8530
bool p isModified: 0
bool p containsTransformation: 0
Sg File Info* p startOfConstruct: 0x7fb8efef7e28
Sg_File_Info* p_endOfConstruct : 0x7fb8efef7e80
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr : 0
AstAttributeMechanism* p attributeMechanism: 0
bool p_containsTransformationToSurroundingWhitespace: 0
SqName p name: I
std::string p_microsoft_uuid_string :
SgType* p_typeptr : 0x3433790
SgInitializer* p initptr: 0
SgInitializedName* p_prev_decl_item: 0x346e3b0
bool p is initializer: 1
SgDeclarationStatement* p_declptr : 0x7fb81fa9a4a0
SgStorageModifier* p_storageModifier : 0x350e400
SgScopeStatement* p_scope : 0x339f080
SgInitializedName::preinitialization_enum p_preinitialization: 0
bool p isCoArray: 0
SqInitializedName::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
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
SqDeclarationModifier::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
bool p is braced initialized: 0
```

pointer:0x339f080 SgFunctionDefinition /home/liao6/workspace/github/rose-ast.git/subroutine1.f 0:0 IsTransformation:0 IsOutputInCodeGeneration:1

```
SgNode* p_parent : 0x7fb81fe1b010
bool p_isModified: 1
bool p_containsTransformation: 0
Sg_File_Info* p_startOfConstruct : 0x7fb8efef74e0
Sg_File_Info* p_endOfConstruct : 0x7fb8efef7538
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr: 0
AstAttributeMechanism* p_attributeMechanism: 0
bool p_containsTransformationToSurroundingWhitespace: 0
SgLabelRefExp* p_numeric_label: 0
int p_source_sequence_value: 3
SgSymbolTable* p_symbol_table : 0x7fb8efe27438
SgTypeTable* p_type_table: 0x2126db0
std::set<SgSymbol*> p_type_elaboration_list : []
std::set<SgSymbol*> p_hidden_type_list : []
std::set<SgSymbol*> p_hidden_declaration_list : []
SgBasicBlock* p_body: 0x33164f0
std::map<SgNode*,int> p_scope_number_list : []
```

pointer:0x33164f0 SgBasicBlock /home/liao6/workspace/github/rose-ast.git/subroutine1.f 0:0 IsTransformation:0 IsOutputInCodeGeneration:1

Click here to go to the parent node

SgNode* p_parent : 0x339f080

```
bool p isModified: 1
bool p_containsTransformation: 0
Sg_File_Info* p_startOfConstruct : 0x7fb8efef7590
Sg_File_Info* p_endOfConstruct : 0x7fb8efef75e8
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr: 0
AstAttributeMechanism* p_attributeMechanism: 0
bool p_containsTransformationToSurroundingWhitespace: 0
SgLabelRefExp* p_numeric_label : 0x379aaa0
int p_source_sequence_value: 4
SgSymbolTable* p_symbol_table: 0x7fb8efe27308
SgTypeTable* p_type_table: 0x2126d88
std::set<SgSymbol*> p_type_elaboration_list : []
std::set<SgSymbol*> p_hidden_type_list : []
std::set<SgSymbol*> p_hidden_declaration_list : []
SgStatementPtrList p_statements: [0x7fb81fbb8010, 0x7fb81fbb82a0, 0x7fb81fbb8530, 0x36e3050]
std::string p_asm_function_body :
```

```
Click here to go to the parent node
SgNode* p_parent: 0x33164f0
bool p isModified: 1
bool p_containsTransformation: 0
Sg_File_Info* p_startOfConstruct : 0x7fb8efef7640
Sg_File_Info* p_endOfConstruct : 0x7fb8efef7698
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr: 0
AstAttributeMechanism* p_attributeMechanism: 0
bool p containsTransformationToSurroundingWhitespace: 0
SgLabelRefExp* p_numeric_label: 0
int p_source_sequence_value: 5
unsigned int p decl attributes: 0
std::string p_linkage:
SqDeclarationModifier p_declarationModifier : <too long>: <too long>: SqDeclarationModifier(isUnknown() = false isDefault() = true isFrien
bool p_nameOnly: 0
bool p_forward: 0
bool p_externBrace: 0
bool p_skipElaborateType: 0
SgDeclarationStatement* p definingDeclaration: 0x7fb81fbb8010
SgDeclarationStatement* p_firstNondefiningDeclaration: 0
SgQualifiedNamePtrList p qualifiedNameList : []
std::string p binding label:
SgDeclarationStatement* p_baseTypeDefiningDeclaration: 0
SgInitializedNamePtrList p_variables: [0x346e120]
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_visability_attribute_enum p_gnu_extension_visability: 1
SgVariableDeclaration::gnu_extension_declaration_attributes_enum p_gnu_extension_declaration_attribute: 1
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
```

Declaration mangled name: _variable_declaration__variable_type_i_variable_name_OUT__1__11773_____Fb_v_Gb___Fe___L0R__sco

pointer:0x7fb81fbb8010 SgVariableDeclaration

IsOutputInCodeGeneration:0

IsTransformation:0

/home/liao6/workspace/github/rose-ast.git/subroutine1.f 2:17

```
pointer:0x346e120
SgInitializedName
/home/liao6/workspace/github/rose-ast.git/subroutine1.f 2:17
IsTransformation:0
IsOutputInCodeGeneration:0
```

```
SqNode* p parent: 0x7fb81fbb8010
bool p isModified: 0
bool p containsTransformation: 0
Sg File Info* p startOfConstruct: 0x7fb8efef76f0
Sg_File_Info* p_endOfConstruct : 0x7fb8efef7748
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr : 0
AstAttributeMechanism* p attributeMechanism: 0
bool p containsTransformationToSurroundingWhitespace: 0
SqName p name: N
std::string p_microsoft_uuid_string :
SgType* p_typeptr : 0x3433790
SgInitializer* p initptr: 0
SgInitializedName* p_prev_decl_item: 0x346e120
bool p is initializer: 1
SgDeclarationStatement* p_declptr : 0x7fb81fa9a010
SgStorageModifier* p_storageModifier : 0x350e3b0
SgScopeStatement* p_scope : 0x339f080
SgInitializedName::preinitialization_enum p_preinitialization: 0
bool p isCoArray: 0
SqInitializedName::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
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
SqDeclarationModifier::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
bool p is braced initialized: 0
```

```
Click here to go to the parent node
SgNode* p_parent: 0x33164f0
bool p isModified: 1
bool p_containsTransformation: 0
Sg_File_Info* p_startOfConstruct : 0x7fb8efef7a60
Sg_File_Info* p_endOfConstruct : 0x7fb8efef7ab8
AttachedPreprocessingInfoType* p attachedPreprocessingInfoPtr: 0
AstAttributeMechanism* p_attributeMechanism: 0
bool p containsTransformationToSurroundingWhitespace: 0
SgLabelRefExp* p_numeric_label: 0
int p_source_sequence_value: 6
unsigned int p decl attributes: 0
std::string p_linkage:
SqDeclarationModifier p_declarationModifier : <too long>: <too long>: SqDeclarationModifier(isUnknown() = false isDefault() = true isFrien
bool p_nameOnly: 0
bool p_forward: 0
bool p_externBrace: 0
bool p_skipElaborateType: 0
SgDeclarationStatement* p definingDeclaration: 0x7fb81fbb82a0
SgDeclarationStatement* p_firstNondefiningDeclaration: 0
SgQualifiedNamePtrList p qualifiedNameList : []
std::string p binding label:
SgDeclarationStatement* p_baseTypeDefiningDeclaration: 0
SgInitializedNamePtrList p_variables: [0x346e268]
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_visability_attribute_enum p_gnu_extension_visability: 1
SgVariableDeclaration::gnu_extension_declaration_attributes_enum p_gnu_extension_declaration_attribute: 1
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
```

Declaration mangled name: _variable_declaration__variable_type__Ab_d_index_unnamed_index_Ae__variable_name_OUT__1__11773

pointer:0x7fb81fbb82a0 SgVariableDeclaration

IsOutputInCodeGeneration:0

IsTransformation:0

/home/liao6/workspace/github/rose-ast.git/subroutine1.f 3:40

```
pointer:0x346e268
SgInitializedName
/home/liao6/workspace/github/rose-ast.git/subroutine1.f 3:40
IsTransformation:0
IsOutputInCodeGeneration:0
```

```
SqNode* p parent: 0x7fb81fbb82a0
bool p isModified: 0
bool p containsTransformation: 0
Sg File Info* p startOfConstruct: 0x7fb8efef7c18
Sg_File_Info* p_endOfConstruct : 0x7fb8efef7c70
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr : 0
AstAttributeMechanism* p_attributeMechanism: 0
bool p containsTransformationToSurroundingWhitespace: 0
SqName p name: array
std::string p_microsoft_uuid_string :
SgType* p_typeptr : 0x3666030
SgInitializer* p initptr: 0
SgInitializedName* p_prev_decl_item: 0x346e268
bool p is initializer: 1
SgDeclarationStatement* p_declptr : 0x7fb81fa9a258
SgStorageModifier* p_storageModifier : 0x350e3d8
SgScopeStatement* p_scope : 0x339f080
SgInitializedName::preinitialization_enum p_preinitialization: 0
bool p isCoArray: 0
SqInitializedName::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
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
SqDeclarationModifier::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
bool p is braced initialized: 0
```

```
Click here to go to the parent node
SgNode* p_parent: 0x33164f0
bool p isModified: 1
bool p_containsTransformation: 0
Sg_File_Info* p_startOfConstruct : 0x7fb8efef7d78
Sg_File_Info* p_endOfConstruct : 0x7fb8efef7dd0
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr: 0
AstAttributeMechanism* p_attributeMechanism: 0
bool p containsTransformationToSurroundingWhitespace: 0
SgLabelRefExp* p_numeric_label: 0
int p_source_sequence_value: 7
unsigned int p decl attributes: 0
std::string p_linkage:
SqDeclarationModifier p_declarationModifier : <too long>: <too long>: SqDeclarationModifier(isUnknown() = false isDefault() = true isFrien
bool p_nameOnly: 0
bool p_forward: 0
bool p_externBrace: 0
bool p_skipElaborateType: 0
SgDeclarationStatement* p definingDeclaration: 0x7fb81fbb8530
SgDeclarationStatement* p_firstNondefiningDeclaration: 0
SgQualifiedNamePtrList p qualifiedNameList : []
std::string p binding label:
SgDeclarationStatement* p_baseTypeDefiningDeclaration: 0
SgInitializedNamePtrList p_variables : [0x346e3b0]
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_visability_attribute_enum p_gnu_extension_visability: 1
SgVariableDeclaration::gnu_extension_declaration_attributes_enum p_gnu_extension_declaration_attribute: 1
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
```

Declaration mangled name: _variable_declaration__variable_type_i_variable_name_OUT__1__11773_____Fb_v_Gb___Fe___L0R__sco

pointer:0x7fb81fbb8530 SgVariableDeclaration

IsOutputInCodeGeneration:0

IsTransformation:0

/home/liao6/workspace/github/rose-ast.git/subroutine1.f 4:17

```
pointer:0x346e3b0
SgInitializedName
/home/liao6/workspace/github/rose-ast.git/subroutine1.f 4:17
IsTransformation:0
IsOutputInCodeGeneration:0
```

```
SqNode* p parent: 0x7fb81fbb8530
bool p isModified: 0
bool p containsTransformation: 0
Sg File Info* p startOfConstruct: 0x7fb8efef7e28
Sg_File_Info* p_endOfConstruct : 0x7fb8efef7e80
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr : 0
AstAttributeMechanism* p attributeMechanism: 0
bool p_containsTransformationToSurroundingWhitespace: 0
SqName p name: I
std::string p_microsoft_uuid_string :
SgType* p_typeptr : 0x3433790
SgInitializer* p initptr: 0
SgInitializedName* p_prev_decl_item: 0x346e3b0
bool p is initializer: 1
SgDeclarationStatement* p_declptr : 0x7fb81fa9a4a0
SgStorageModifier* p_storageModifier : 0x350e400
SgScopeStatement* p_scope : 0x339f080
SgInitializedName::preinitialization_enum p_preinitialization: 0
bool p isCoArray: 0
SqInitializedName::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
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
SqDeclarationModifier::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
bool p is braced initialized: 0
```

pointer:0x36e3050 SgFortranDo /home/liao6/workspace/github/rose-ast.git/subroutine1.f 5:6 IsTransformation:0 IsOutputInCodeGeneration:0

Click here to go to the parent node

bool p_has_end_statement: 0

```
SgNode* p_parent: 0x33164f0
bool p isModified: 1
bool p_containsTransformation: 0
Sg File Info* p startOfConstruct: 0x7fb8efef8718
Sg_File_Info* p_endOfConstruct : 0x7fb8efef8770
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr: 0
AstAttributeMechanism* p_attributeMechanism: 0
bool p_containsTransformationToSurroundingWhitespace: 0
SgLabelRefExp* p_numeric_label: 0
int p_source_sequence_value: 8
SgSymbolTable* p_symbol_table: 0x7fb8efe27698
SgTypeTable* p_type_table: 0x2126e00
std::set<SgSymbol*> p_type_elaboration_list : []
std::set<SgSymbol*> p_hidden_type_list : []
std::set<SgSymbol*> p_hidden_declaration_list : []
SgExpression* p_initialization : 0x36ac540
SgExpression* p_bound: 0x35d9668
SgExpression* p_increment : 0x363ef70
SgBasicBlock* p_body: 0x3316608
SgLabelRefExp* p_end_numeric_label : 0x379a9f0
std::string p_string_label:
bool p old style: 0
```

pointer:0x36ac540 SgAssignOp /home/liao6/workspace/github/rose-ast.git/subroutine1.f 5:6 IsTransformation:0 IsOutputInCodeGeneration:0 Expression type: int

Click here to go to the parent node

SgNode* p_parent : 0x36e3050

```
bool p_isModified: 0
bool p_containsTransformation: 0
Sg_File_Info* p_startOfConstruct : 0x7fb8efef8350
Sg_File_Info* p_endOfConstruct : 0x7fb8efef83a8
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 : 0x7fb8efef8400
SgExpression* p_lhs_operand_i : 0x35a69d8
SgExpression* p_rhs_operand_i : 0x35d9600
SgType* p_expression_type : 0
SgExpression* p_originalExpressionTree : 0
```

pointer:0x35a69d8 SgVarRefExp /home/liao6/workspace/github/rose-ast.git/subroutine1.f 5:12 IsTransformation:0 IsOutputInCodeGeneration:0 Expression type: int

Click here to go to the parent node

bool p_global_qualification_required: 0

SgNode* p_parent: 0x36ac540 bool p_isModified: 0 bool p_containsTransformation: 0 Sg_File_Info* p_startOfConstruct : 0x7fb8efef8248 Sg_File_Info* p_endOfConstruct : 0x7fb8efef82a0 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: 0x7fb8efef82f8 SgVariableSymbol* p_symbol: 0x3521ca0 SgExpression* p_originalExpressionTree : 0 int p_name_qualification_length: 0 bool p_type_elaboration_required: 0

```
SgIntVal
/home/liao6/workspace/github/rose-ast.git/subroutine1.f 5:16
IsTransformation:0
IsOutputInCodeGeneration:0
Expression type: int

Click here to go to the parent node

SgNode* p_parent: 0x36ac540
```

pointer:0x35d9600

std::string p_valueString: 1

```
bool p_isModified: 0
bool p_containsTransformation: 0
$CLASSNAME* p_freepointer: 0xffffffffffffff
$g_File_Info* p_startOfConstruct: 0x7fb8efef8038
$g_File_Info* p_endOfConstruct: 0x7fb8efef8090
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr: 0
AstAttributeMechanism* p_attributeMechanism: 0
bool p_containsTransformationToSurroundingWhitespace: 0
bool p_need_paren: 0
bool p_lvalue: 0
bool p_lvalue: 0
bool p_global_qualified_name: 0
$g_File_Info* p_operatorPosition: 0x7fb8efef80e8
$gExpression* p_originalExpressionTree: 0
int p_value: 1
```

pointer:0x35d9668
SgIntVal
/home/liao6/workspace/github/rose-ast.git/subroutine1.f 5:19
IsTransformation:0
IsOutputInCodeGeneration:0
Expression type: int

Click here to go to the parent node

SgNode* p_parent : 0x36e3050

bool p_isModified: 0
bool p_containsTransformation: 0
\$CLASSNAME* p_freepointer: 0xfffffffffffff
\$g_File_Info* p_startOfConstruct: 0x7fb8efef8140
\$g_File_Info* p_endOfConstruct: 0x7fb8efef8198
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
\$g_File_Info* p_operatorPosition: 0x7fb8efef81f0
\$gExpression* p_originalExpressionTree: 0
int p_value: 5
\$std::string p_valueString: 5

pointer:0x363ef70 SgNullExpression NULL_FILE 0:0 IsTransformation:0 IsOutputInCodeGeneration:1 Expression type: int

Click here to go to the parent node

SgNode* p_parent: 0x36e3050
bool p_isModified: 0
bool p_containsTransformation: 0
\$CLASSNAME* p_freepointer: 0xfffffffffffff
Sg_File_Info* p_startOfConstruct: 0x7fb8efef8508
Sg_File_Info* p_endOfConstruct: 0x7fb8efef8560
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 : 0x7fb8efef85b8

pointer:0x3316608 SgBasicBlock /home/liao6/workspace/github/rose-ast.git/subroutine1.f 6:6 IsTransformation:0 IsOutputInCodeGeneration:1

```
SgNode* p_parent : 0x36e3050
bool p_isModified: 1
bool p_containsTransformation: 0
Sg_File_Info* p_startOfConstruct : 0x7fb8efef8458
Sg_File_Info* p_endOfConstruct : 0x7fb8efef84b0
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr: 0
AstAttributeMechanism* p_attributeMechanism: 0
bool p_containsTransformationToSurroundingWhitespace: 0
SgLabelRefExp* p_numeric_label: 0
int p_source_sequence_value: 9
SgSymbolTable* p_symbol_table : 0x7fb8efe27568
SgTypeTable* p_type_table: 0x2126dd8
std::set<SgSymbol*> p_type_elaboration_list : []
std::set<SgSymbol*> p_hidden_type_list : []
std::set<SgSymbol*> p_hidden_declaration_list : []
SgStatementPtrList p_statements : [0x38794b0, 0x38a82c0]
std::string p_asm_function_body :
```

pointer:0x38794b0 SgExprStatement /home/liao6/workspace/github/rose-ast.git/subroutine1.f 6:6 IsTransformation:0 IsOutputInCodeGeneration:0

Click here to go to the parent node

bool p_isModified: 1

bool p_containsTransformation: 0

SgNode* p_parent: 0x3316608

AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr: 0

AstAttributeMechanism* p_attributeMechanism: 0

bool p_containsTransformationToSurroundingWhitespace: 0

SgLabelRefExp* p_numeric_label : 0 int p_source_sequence_value : 10 SgExpression* p_expression : 0x36ac5b0

pointer:0x36ac5b0 SgAssignOp /home/liao6/workspace/github/rose-ast.git/subroutine1.f 6:6 IsTransformation:0 IsOutputInCodeGeneration:0 Expression type: double

Click here to go to the parent node

SgExpression* p_originalExpressionTree : 0

```
SgNode* p_parent: 0x38794b0
bool p_isModified: 0
bool p_containsTransformation: 0
Sg_File_Info* p_startOfConstruct : 0x7fb8efef8d48
Sg_File_Info* p_endOfConstruct : 0x7fb8efef8cf0
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 : 0x7fb8efef8da0
SgExpression* p_lhs_operand_i : 0x380fd10
SgExpression* p_rhs_operand_i : 0x3846820
SgType* p_expression_type : 0
```

pointer:0x380fd10 SgPntrArrRefExp /home/liao6/workspace/github/rose-ast.git/subroutine1.f 6:6 IsTransformation:0 IsOutputInCodeGeneration:0 Expression type: double

Click here to go to the parent node

SgExpression* p_originalExpressionTree : 0

```
SgNode* p_parent: 0x36ac5b0
bool p_isModified: 0
bool p_containsTransformation: 0
Sg_File_Info* p_startOfConstruct : 0x7fb8efef8ae0
Sg_File_Info* p_endOfConstruct : 0x7fb8efef8b38
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 : 0x7fb8efef8b90
SgExpression* p_lhs_operand_i : 0x35a6aa8
SgExpression* p_rhs_operand_i : 0x360c2f8
SgType* p_expression_type : 0
```

pointer:0x35a6aa8 SgVarRefExp /home/liao6/workspace/github/rose-ast.git/subroutine1.f 6:6 IsTransformation:0 IsOutputInCodeGeneration:0 Expression type: double []

Click here to go to the parent node

bool p_global_qualification_required: 0

SgNode* p_parent: 0x380fd10 bool p_isModified: 0 bool p_containsTransformation: 0 Sg_File_Info* p_startOfConstruct : 0x7fb8efef89d8 Sg_File_Info* p_endOfConstruct : 0x7fb8efef8a30 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 : 0x7fb8efef8a88 SgVariableSymbol* p_symbol : 0x3521c70 SgExpression* p_originalExpressionTree : 0 int p_name_qualification_length: 0 bool p_type_elaboration_required: 0

pointer:0x360c2f8 SgExprListExp NULL_FILE 0:0 IsTransformation:0 IsOutputInCodeGeneration:1 Expression type: int

Click here to go to the parent node

SgExpressionPtrList p_expressions : [0x35a6a40]

pointer:0x35a6a40 SgVarRefExp /home/liao6/workspace/github/rose-ast.git/subroutine1.f 6:12 IsTransformation:0 IsOutputInCodeGeneration:0 Expression type: int

Click here to go to the parent node

bool p_global_qualification_required: 0

SgNode* p_parent: 0x360c2f8 bool p_isModified: 0 bool p_containsTransformation: 0 Sg_File_Info* p_startOfConstruct : 0x7fb8efef87c8 Sg_File_Info* p_endOfConstruct : 0x7fb8efef8820 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 : 0x7fb8efef8878 SgVariableSymbol* p_symbol: 0x3521ca0 SgExpression* p_originalExpressionTree : 0 int p_name_qualification_length: 0 bool p_type_elaboration_required: 0

pointer:0x3846820 SgFloatVal /home/liao6/workspace/github/rose-ast.git/subroutine1.f 6:17 IsTransformation:0 IsOutputInCodeGeneration:0 Expression type: float

```
SgNode* p_parent: 0x36ac5b0
bool p_isModified: 0
bool p_containsTransformation: 0
Sg_File_Info* p_startOfConstruct : 0x7fb8efef8be8
Sg_File_Info* p_endOfConstruct : 0x7fb8efef8c40
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 : 0x7fb8efef8c98
SgExpression* p_originalExpressionTree : 0
float p_value: 0
std::string p_valueString: 0.0
```

pointer:0x38a82c0 SgLabelStatement /home/liao6/workspace/github/rose-ast.git/subroutine1.f 7:6 IsTransformation:0 IsOutputInCodeGeneration:0

Click here to go to the parent node

SgNode* p_parent : 0x3316608

bool p_isModified : 1

bool p_containsTransformation: 0

AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr: 0

AstAttributeMechanism* p_attributeMechanism: 0

bool p_containsTransformationToSurroundingWhitespace: 0

SgLabelRefExp* p_numeric_label : 0x379aa48

int p_source_sequence_value: 11

SgName p_label:

SgScopeStatement* p_scope : 0x339f080

SgStatement* p_statement : 0 bool p_gnu_extension_unused : 0

```
pointer:0x346e4f8
SglnitializedName
/home/liao6/workspace/github/rose-ast.git/subroutine1.f 0:0
IsTransformation:0
IsOutputInCodeGeneration:1
```

```
SqNode* p parent: 0x7fb81fe1b010
bool p isModified: 0
bool p containsTransformation: 0
Sg File Info* p startOfConstruct: 0x7fb8efef7f88
Sg_File_Info* p_endOfConstruct : 0x7fb8efef7fe0
AttachedPreprocessingInfoType* p_attachedPreprocessingInfoPtr : 0
AstAttributeMechanism* p attributeMechanism: 0
bool p containsTransformationToSurroundingWhitespace: 0
SgName p_name : OUT__1__11773__
std::string p_microsoft_uuid_string :
SgType* p_typeptr : 0x31c6140
SgInitializer* p_initptr : 0
SgInitializedName* p_prev_decl_item: 0
bool p is initializer: 1
SqDeclarationStatement* p_declptr: 0
SgStorageModifier* p_storageModifier: 0x350e428
SgScopeStatement* p_scope : 0x33164f0
SgInitializedName::preinitialization_enum p_preinitialization: 0
bool p isCoArray: 0
SqInitializedName::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
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
SqDeclarationModifier::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
bool p is braced initialized: 0
```