**Code Analysis Data for CodeAnalyzer Application**

**(Manually Obtained, Expected Results)**

File: CentralData.cs

Namespace: CodeAnalyzer

Class: CodeAnalysisData

* OwnedClasses: ProgramFile, ProgramClassTypeCollection
* OwnedByClasses: ProgramExecutor

Function: CodeAnalysisData

* Size: 2
* Complexity: 0

Class: InputSessionData

* OwnedClasses: ProgramFile
* OwnedByClasses: ProgramExecutor

Function: InputSessionData

* Size: 4
* Complexity: 0

Function: SetInputSessionData

* Size: 13
* Complexity: 4

Function: EnqueueFiles

* Size: 16
* Complexity: 4

File: CodeAnalyzer.cs

Namespace: CodeAnalyzer

Class: FileProcessor

* OwnedClasses: ProgramFile
* OwnedByClasses: ProgramExecutor
* UsedClasses: ProgramFile

Function: FileProcessor

* Size: 1
* Complexity: 0

Function: ProcessFile

* Size: 41
* Complexity: 6

Function: AddEntryToFileTextData

* Size: 5
* Complexity: 1

Function: DetectDoubleCharacter

* Size: 23
* Complexity: 11

Class: CodeProcessor

* OwnedClasses: ProgramClassTypeCollection, ProgramFile, ProgramType, ProgramFunction, ProgramNamespace, ProgramClassType, ProgramClass, ProgramInterface, ProgramDataType
* OwnedByClasses: ProgramExecutor
* UsedClasses: ProgramFile, ProgramClassTypeCollection, ProgramClass, ProgramInterface

Function: CodeProcessor

* Size: 2
* Complexity: 0

Function: ProcessFileCode

* Size: 32
* Complexity: 6

Function: ProcessProgramClassTypeData

* Size: 48
* Complexity: 10

Function: ProcessFunctionData

* Size: 29
* Complexity: 5

Function: NewNamespace

* Size: 25
* Complexity: 5

Function: NewProgramClassType

* Size: 26
* Complexity: 5

Function: NewClass

* Size: 3
* Complexity: 0

Function: NewInterface

* Size: 3
* Complexity: 0

Function: NewFunction

* Size: 13
* Complexity: 2

Function: GetClassTypeData

* Size: 38
* Complexity: 10

Function: CheckIfFunction

* Size: 43
* Complexity: 11

Function: CheckIfConstructor

* Size: 37
* Complexity: 9

Function: CheckIfDeconstructor

* Size: 21
* Complexity: 3

Function: TestFunctionRequirement

* Size: 28
* Complexity: 1

Function: TestConstructorRequirement

* Size: 28
* Complexity: 1

Function: TestDeconstructorRequirement

* Size: 19
* Complexity: 1

Function: FunctionStep0

* Size: 16
* Complexity: 5

Function: FunctionStep1

* Size: 27
* Complexity: 7

Function: FunctionStep2

* Size: 37
* Complexity: 12

Function: FunctionStep3

* Size: 7
* Complexity: 2

Function: FunctionStep4

* Size: 15
* Complexity: 4

Function: FunctionStep5

* Size: 11
* Complexity: 4

Function: FunctionStep6

* Size: 6
* Complexity: 2

Function: FunctionStep7

* Size: 2
* Complexity: 1

Function: ConstructorStep0

* Size: 9
* Complexity: 2

Function: ConstructorStep1

* Size: 23
* Complexity: 5

Function: ConstructorStep2

* Size: 7
* Complexity: 2

Function: ConstructorStep3

* Size: 9
* Complexity: 2

Function: ConstructorStep4

* Size: 9
* Complexity: 2

Function: ConstructorStep5

* Size: 9
* Complexity: 2

Function: ConstructorStep6

* Size: 10
* Complexity: 2

Function: ConstructorStep7

* Size: 2
* Complexity: 1

Function: DeconstructorStep0

* Size: 9
* Complexity: 2

Function: DeconstructorStep1

* Size: 9
* Complexity: 2

Function: DeconstructorStep2

* Size: 6
* Complexity: 2

Function: DeconstructorStep3

* Size: 6
* Complexity: 2

Function: DeconstructorStep4

* Size: 2
* Complexity: 1

Function: CheckControlFlowScopes

* Size: 23
* Complexity: 16

Function: CheckIfScope

* Size: 28
* Complexity: 5

Function: CheckElseIfScope

* Size: 31
* Complexity: 7

Function: CheckElseScope

* Size: 19
* Complexity: 3

Function: CheckForScope

* Size: 39
* Complexity: 7

Function: CheckForEachScope

* Size: 27
* Complexity: 5

Function: CheckWhileScope

* Size: 33
* Complexity: 6

Function: CheckDoWhileScope

* Size: 13
* Complexity: 2

Function: CheckSwitchScope

* Size: 33
* Complexity: 6

Function: EndBracketedScope

* Size: 34
* Complexity: 11

Function: EndBracketlessScope

* Size: 22
* Complexity: 5

Function: CheckScopeClosersWithinFunction

* Size: 17
* Complexity: 5

Function: CheckScopeOpenersWithinFunction

* Size: 16
* Complexity: 6

Function: UpdateTextData

* Size: 4
* Complexity: 1

Function: IncrementFunctionSize

* Size: 2
* Complexity: 1

Function: IgnoreEntry

* Size: 39
* Complexity: 10

Function: RemoveFunctionSignatureFromTextData

* Size: 15
* Complexity: 2

Function: UpdateStringBuilder

* Size: 10
* Complexity: 3

Class: RelationshipProcessor

* OwnedClasses: ProgramClassType, ProgramClassTypeCollection, ProgramClass, ProgramDataType, ProgramFunction
* OwnedByClasses: ProgramExecutor
* UsedClasses: ProgramClassType, ProgramClassTypeCollection, ProgramDataType

Function: RelationshipProcessor

* Size: 2
* Complexity: 0

Function: ProcessRelationships

* Size: 6
* Complexity: 1

Function: SetInheritanceRelationships

* Size: 41
* Complexity: 7

Function: SetAggregationAndUsingRelationships

* Size: 14
* Complexity: 2

Function: SetAggregationRelationships

* Size: 16
* Complexity: 3

Function: SetUsingRelationships

* Size: 37
* Complexity: 7

File: InputOutput.cs

Namespace: CodeAnalyzer

Class: InputReader

* OwnedByClasses: ProgramExecutor

Function: InputReader

* Size: 9
* Complexity: 0

Function: FormatInput

* Size: 12
* Complexity: 4

Function: SetInputField

* Size: 41
* Complexity: 8

Function: TestDirectoryPath

* Size: 19
* Complexity: 2

Class: OutputWriter

* OwnedClasses: ProgramFile, ProgramNamespace, ProgramClass, ProgramInterface, ProgramFunction, ProgramType, ProgramClassType
* OwnedByClasses: ProgramExecutor
* UsedClasses: ProgramFile, ProgramType, ProgramNamespace, ProgramClass, ProgramInterface, ProgramFunction, ProgramClassType

Function: OutputWriter

* Size: 1
* Complexity: 0

Function: WriteOutput

* Size: 20
* Complexity: 7

Function: PrintFunctions

* Size: 27
* Complexity: 7

Function: PrintRelationships

* Size: 31
* Complexity: 7

Function: WriteFunctionsXML

* Size: 31
* Complexity: 7

Function: WriteRelationshipsXML

* Size: 37
* Complexity: 7

Function: PrintProgramFile

* Size: 3
* Complexity: 0

Function: PrintProgramNamespace

* Size: 2
* Complexity: 0

Function: PrintProgramClass

* Size: 2
* Complexity: 0

Function: PrintProgramInterface

* Size: 2
* Complexity: 0

Function: PrintProgramFunction

* Size: 2
* Complexity: 0

Function: WriteProgramFile

* Size: 4
* Complexity: 0

Function: WriteProgramNamespace

* Size: 4
* Complexity: 0

Function: WriteProgramClass

* Size: 4
* Complexity: 0

Function: WriteProgramInterface

* Size: 4
* Complexity: 0

Function: WriteProgramFunction

* Size: 4
* Complexity: 0

Function: PrintFunctionAnalysisData

* Size: 7
* Complexity: 0

Function: PrintClassAnalysisData

* Size: 47
* Complexity: 12

Function: PrintInterfaceAnalysisData

* Size: 2
* Complexity: 0

Function: PrintInheritanceData

* Size: 23
* Complexity: 6

Function: WriteFunctionAnalysisData

* Size: 9
* Complexity: 0

Function: WriteClassAnalysisData

* Size: 37
* Complexity: 8

Function: WriteInterfaceAnalysisData

* Size: 1
* Complexity: 0

Function: WriteInheritanceData

* Size: 17
* Complexity: 4

Function: WriteClosingTag

* Size: 10
* Complexity: 5

Function: NewFilePath

* Size: 13
* Complexity: 4

Function: WriteFile

* Size: 14
* Complexity: 2

Function: PrintTabs

* Size: 4
* Complexity: 1

Function: GetTabs

* Size: 8
* Complexity: 2

File: MainControl.cs

Namespace: CodeAnalyzer

Class: Launcher

* OwnedClasses: ProgramExecutor

Function: Main

* Size: 3
* Complexity: 0

Class: ProgramExecutor

* OwnedClasses: InputSessionData, CodeAnalysisData, InputReader, OutputWriter, ProgramFile, FileProcessor, CodeProcessor, ProgramClassType, RelationshipProcessor
* OwnedByClasses: Launcher

Function: ProgramExecutor

* Size: 2
* Complexity: 0

Function: ExecuteProgram

* Size: 40
* Complexity: 4

File: TypeIdentifiers.cs

Namespace: CodeAnalyzer

Class: ProgramType

* SubClasses: ProgramDataType, ProgramFile, ProgramNamespace
* OwnedByClasses: OutputWriter, CodeProcessor
* UsedByClasses: OutputWriter

Function: ProgramType

* Size: 2
* Complexity: 0

Class: ProgramDataType

* SubClasses: ProgramClassType, ProgramFunction
* SuperClasses: ProgramType
* OwnedByClasses: CodeProcessor, RelationshipProcessor
* UsedByClasses: RelationshipProcessor

Function: ProgramDataType

* Size: 3
* Complexity: 0

Class: ProgramClassType

* SubClasses: ProgramClass, ProgramInterface
* SuperClasses: ProgramDataType
* OwnedClasses: ProgramClassTypeCollection
* OwnedByClasses: ProgramExecutor, ProgramClass, ProgramClassTypeCollection, OutputWriter, CodeProcessor, RelationshipProcessor
* UsedByClasses: ProgramClassTypeCollection, OutputWriter, RelationshipProcessor

Function: ProgramClassType

* Size: 2
* Complexity: 0

Function: Equals

* Size: 1
* Complexity: 0

Function: GetHashCode

* Size: 1
* Complexity: 0

Class: ProgramFile

* SuperClasses: ProgramType
* OwnedByClasses: ProgramExecutor, CodeAnalysisData, InputSessionData, OutputWriter, FileProcessor, CodeProcessor
* UsedByClasses: OutputWriter, FileProcessor, CodeProcessor

Function: ProgramFile

* Size: 3
* Complexity: 0

Class: ProgramNamespace

* SuperClasses: ProgramType
* OwnedByClasses: OutputWriter, CodeProcessor
* UsedByClasses: OutputWriter

Function: ProgramNamespace

* Size: 1
* Complexity: 0

Class: ProgramClass

* SuperClasses: ProgramClassType
* OwnedClasses: ProgramClassType
* OwnedByClasses: OutputWriter, CodeProcessor, RelationshipProcessor
* UsedByClasses: OutputWriter, CodeProcessor

Function: ProgramClass

* Size: 4
* Complexity: 0

Class: ProgramInterface

* SuperClasses: ProgramClassType
* OwnedByClasses: OutputWriter, CodeProcessor
* UsedByClasses: OutputWriter, CodeProcessor

Function: ProgramInterface

* Size: 1
* Complexity: 0

Class: ProgramFunction

* SuperClasses: ProgramDataType
* OwnedByClasses: OutputWriter, CodeProcessor, RelationshipProcessor
* UsedByClasses: OutputWriter

Function: ProgramFunction

* Size: 5
* Complexity: 0

Class: ProgramClassTypeCollection

* OwnedClasses: ProgramClassType
* OwnedByClasses: CodeAnalysisData, ProgramClassType, CodeProcessor, RelationshipProcessor
* UsedClasses: ProgramClassType
* UsedByClasses: CodeProcessor, RelationshipProcessor

Function: NotifyNameChange

* Size: 1
* Complexity: 0

Function: GetKeyForItem

* Size: 1
* Complexity: 0

Function: InsertItem

* Size: 2
* Complexity: 0

Function: SetItem

* Size: 2
* Complexity: 0

Function: RemoveItem

* Size: 2
* Complexity: 0

Function: ClearItems

* Size: 2
* Complexity: 1