SENG 300

Structural Diagram:

The Structural Diagram shows the Main class at the top, displaying that it involves an interaction with the DeclarationsAndReferenceCounter class. The DeclarationAndReferenceCounter class is the most important because it interacts with most of the important classes. DeclarationAndReferenceCounter interacts with Main, ASTVisitor, creates an ASTParser which creates an ASTTree full of ASTNodes (indication of interaction shown by arrows). ASTParser , since it is creating a tree full of ASTNodes, shows a relationship between the two on the diagram. As well, since ASTVisitor visits and interacts with several other types of ASTNodes, a relationship between the two is shown.

Sequence Diagram:

When the program first runs, main creates a DeclarationsAndReferencesCounter object, then the DeclarationsAndReferencesCounter object’s countInJarOnDirectory method is called, which makes other calls to methods within DeclarationsAndReferencesCounter. extractJarFiles() is called within countInJarOnDirectory(), it interacts directly with file objects. If the file is a directory then a recursive call is made to displayDirectoryContents, of else listFiles is called and a fileList is returned. findDeclarationsOrReferences() is called, which makes a call to parse(). A new Parser object is instantiated which creates an AST structured with ASTNodes. ASTVisitor visits the ASTNodes which accepts the visit from ASTVisitor and information about the node is provided. DeclarationsAndReferencesCounter then makes a call to printResults() and deleteDirectory() after ASTVisitor finishes visiting the ASTNodes of the AST Tree.

State Diagram: