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## Tutorial Type

Download the assignment3.zip and follow the instruction of Assignment 3 except changing the name of root folder into **name-exercise**. Make sure you can compile your code.

Create some new classes as follows:

```
case class Symbol(name:String,typ:Type,val:Val)
```

```
trait Val
```

```
case class FunctionType(input:List[Type],output:Type) extends Type
```

### Question 1.

Change method visitProgram to make it return a list of Symbol that are from global declarations?

### Question 2.

Change the method in Question 1 so that it can check if there is any duplication of the name in the list? If there is a duplication, the exception Redeclared variable/function should be returned.

### Question 3.

Write corresponding visit methods that can put parameters into the list of Symbol, when putting new Symbol into the list, if there is a duplication of a name in the same scope, a Redeclared parameter should be thrown ?

### Question 4.

Write corresponding visit methods that can put local declarations into the list of Symbol, when putting new Symbol into the list, if there is a duplication of a name in the same scope, a Redeclared variable should be thrown ?