

# 3. SCOPING

## Learning Objectives

After the completion of this chapter, the student will be able to

- Understand what is Scoping
- Able to implement the LEGB rule
- Understand what is module
- Understand the implementation of access control in programming language

## Important Notes and Key Points

- ❖ Scope refers to the visibility of variables, parameters and functions in one part of a program to another part of the same program.
- ❖ The process of binding a variable name with an object is called mapping. = (equal to sign) is used in programming languages to map the variable and object.
- ❖ Namespaces are containers for mapping names of variables to objects.
- ❖ The scope of a variable is that part of the code where it is visible.
- ❖ The duration for which a variable is alive is called its 'life time'.
- ❖ Local scope refers to variables defined in current function.

- ❖ A variable which is declared outside of all the functions in a program is known as global variable. This means, global variable can be accessed inside or outside of all the functions in a program.
- ❖ A variable which is declared inside a function which contains another function definition with in it, the inner function can also access the variable of the outer function. This scope is called enclosed scope.
- ❖ The built-in scope has all the names that are pre-loaded into the program scope when we start the compiler or interpreter.
- ❖ A module is a part of a program. Programs are composed of one or more independently developed modules. A single module can contain one or several statements closely related each other.
- ❖ Access control is a security technique that regulates who or what can view or use resources in a computing environment.