

1. Differentiate between private and public access/scope. Perform the question no. 4 with class instead of structure with having the data members private and some member functions in private scope and some in public scope.

The difference between private and public access/scope is that variables declared in private scope can't be accessed outside of the scope in which they are defined; they are private, and if we have to access them outside of the scope, we have to write code to get and set the values or declare a public function that can be accessed publicly. This is necessary for security purposes, as not everyone should have access to all variables.

A public access/scope variable is something that we can access anywhere even outside its scope. It is necessary for some variables that are not sensitive for the public or even for debugging and testing purposes.