CRT

2. **Method declaration** defines the methods signature, including its name, return type, and parameters. **Method body** contains the code or instructions that specify the actions the method performs, enclosed within curly brackets.

3. The type of keyword used to change the access level of a method is the access modifier keyword. (example: public, privatem, protected)

4. Another word used for descriivng the access level of a method is **visibility**.

5. **Var3**: Local variable with a scope limited to the method01() method. It exists only when method01() is executed.
Var4: Loop variable with a scope restricted to the for loop inside mehtod01() .
Var1: local variable with a scope restricted to the main() method.
Var2: loop variable with a scope restricted to the for loop inside main().

6. a) public static int getVowels(String parameter) {
        // method body here
}

b) public static int exatractDigit(int parameter) {
    //method body here
}

c) public static String insertString(String parameter1, int parameter2) {
    //method body here
}

7. a) The compiler distinguishes methods based on their method signatures, which include the method name and the number, types, and order of parameters.
b) yes, two methods in the same class can have the same name as long as their parameters are different (method overloading).

8.a) The return statement is used to send a value back to the calling method.
b)A return statement can send back only one value.
c)• A method that returns a value specifies the data type of the return value in its signature.

- A method that does not return a value uses the keyword void instead of a return type.

9. public static int doSomething() {

return(5);

}

Error:

The method doSomething() is declared as returning an int, but in the main() method, it is being assigned to a variable num of type void, which is invalid.

Fix: Change the type of num to int:

int num;

num = doSomething();