

# EXERCISE: PREDEFINED CLASS

**STIA1123 –PROGRAMMING II**

1. Write an application that calculates the squares and cubes of the numbers from 0 to 10 and prints the resulting values in a table format, a shown below. You must use Math class to solve this problem.

Number Square Cube

0 0 0

1 1 1

2 4 8

and so on

1. Write a program called CountA that accepts a String parameter and display the number of times the character 'A' is found in the string.
2. Write a program called PrintReverse that accepts a String parameter and print the string that contains the characters of the parameter in reverse order.
3. Write a program called RandomInRange that accepts two integer parameters representing a range. Display a random integer in the specified range (inclusive). Display zero if the first parameter is greater than the second.

3)

**import** java.util.\*;

**class** ReverseString  
{  
  **public** **static** **void** main(String args[])  
  {  
    String original, reverse = "";  
    Scanner in = **new** Scanner(System.in);

    System.out.println("Enter a string to reverse");  
    original = in.nextLine();

**int** length = original.length();

**for** (**int** i = length - 1 ; i >= 0 ; i--)  
      reverse = reverse + original.charAt(i);

    System.out.println("Reverse of the string: " + reverse);  
  }  
}

// Java program to reverse a string using recursion   
   
class StringReverse   
{   
 /\* Function to print reverse of the passed string \*/  
 void reverse(String str)   
 {   
 if ((str==null)||(str.length() <= 1))   
 System.out.println(str);   
 else  
 {   
 System.out.print(str.charAt(str.length()-1));   
 reverse(str.substring(0,str.length()-1));   
 }   
 }   
   
 /\* Driver program to test above function \*/  
 public static void main(String[] args)   
 {   
 String str = "Geeks for Geeks";   
 StringReverse obj = new StringReverse();   
 obj.reverse(str);   
 }   
}

1. // creating an instance of AdditionProgram class
2. Addition additionObj = new **Addition**();
3. // calling additionFunction() method to add two integer using instance created in above step.

public class Test { //Capitalized name for classes are used in Java

private final ini[] locations; //key final mean that, is must be assigned before object is constructed and can not be changed later.

public Test(int[] locations) {

this.locations = locations;//To access to class member, when method argument has the same name use `this` key word.

}

public boolean ckeckYourSelf(int value) { //This method is accessed only from a object.

for(int location : locations) {

if(location == value) {

return true; //When you use key word return insied of loop you exit from it. In this case you exit also from whole method.

}

}

return false; //Method should be simple and perform one task. So you can ge more flexibility.

}

public static int[] locations = {1,2,3};//This is static array that is not part of object, but can be used in it.

public static void main(String[] args) { //This is declaration of public method that is not part of create object. It can be accessed from every place.

Test test = new Test(Test.locations); //We declare variable test, and create new instance (obect) of class Test.

String result;

if(test.checkYourSelf(2)) {//We moved outsie the string

result = "Hurray";

} else {

result = "Try agian"

}

System.out.println(result); //We have only one place where write is done. Easy to change in future.

}