**NAME: ZISHNENDU SARKER**

**ROLL: 2K19/CO/450**

**JAVA PROGRAMMING**

**LAB ASSIGNMENT 03**

**Group: A, G3**

* **Java Program to Display Prime Numbers Between Intervals Using Function**

**Code:**

public class Prime {

public static void main(String[] args) {

int low = 20, high = 50;

while (low < high) {

if(checkPrimeNumber(low))

System.out.print(low + " ");

++low;

}

}

public static boolean checkPrimeNumber(int num) {

boolean flag = true;

for(int i = 2; i <= num/2; ++i) {

if(num % i == 0) {

flag = false;

break;

}

}

return flag;

}

}

**Output:**



* **Java Program to Find Factorial of a Number Using Recursion**

**Code:**

public class Factorial {

public static void main(String[] args) {

int num = 6;

long factorial = multiplyNumbers(num);

System.out.println("Factorial of " + num + " = " + factorial);

}

public static long multiplyNumbers(int num)

{

if (num >= 1)

return num \* multiplyNumbers(num - 1);

else

return 1;

}

}

**Output:**

****

* **Java Program to Convert Binary Number to Decimal and vice-versa using functions**

**Code:**

class Main {

public static void main(String[] args) {

long num = 110110111;

int decimal = convertBinaryToDecimal(num);

System.out.println("Binary to Decimal");

System.out.println(num + " = " + decimal);

}

public static int convertBinaryToDecimal(long num) {

int decimalNumber = 0, i = 0;

long remainder;

while (num != 0) {

remainder = num % 10;

num /= 10;

decimalNumber += remainder \* Math.pow(2, i);

++i;

}

return decimalNumber;

}

}

**Output:**

****

* **Java Program to Call One Constructor from another**

**Code :**

class Main {

int sum;

Main() {

this(5, 2);

}

Main(int arg1, int arg2) {

this.sum = arg1 + arg2;

}

void display() {

System.out.println("Sum is: " + sum);

}

public static void main(String[] args) {

Main obj = new Main();

obj.display();

}

}

**Output:**

****

* **Java Program to implement private constructors**

**Code:**

class Test {

private Test () {

System.out.println("This is a private constructor.");

}

public static void instanceMethod() {

Test obj = new Test();

}

}

class Main {

public static void main(String[] args) {

Test.instanceMethod();

}

}

**Output:**

****

* **Java Program to pass method call as arguments to another method**

**Code:**

class Main {

public int add(int a, int b) {

int sum = a + b;

return sum;

}

public void square(int num) {

int result = num \* num;

System.out.println(result); // prints 576

}

public static void main(String[] args) {

Main obj = new Main();

obj.square(obj.add(15, 9));

}

}

**Output:**

