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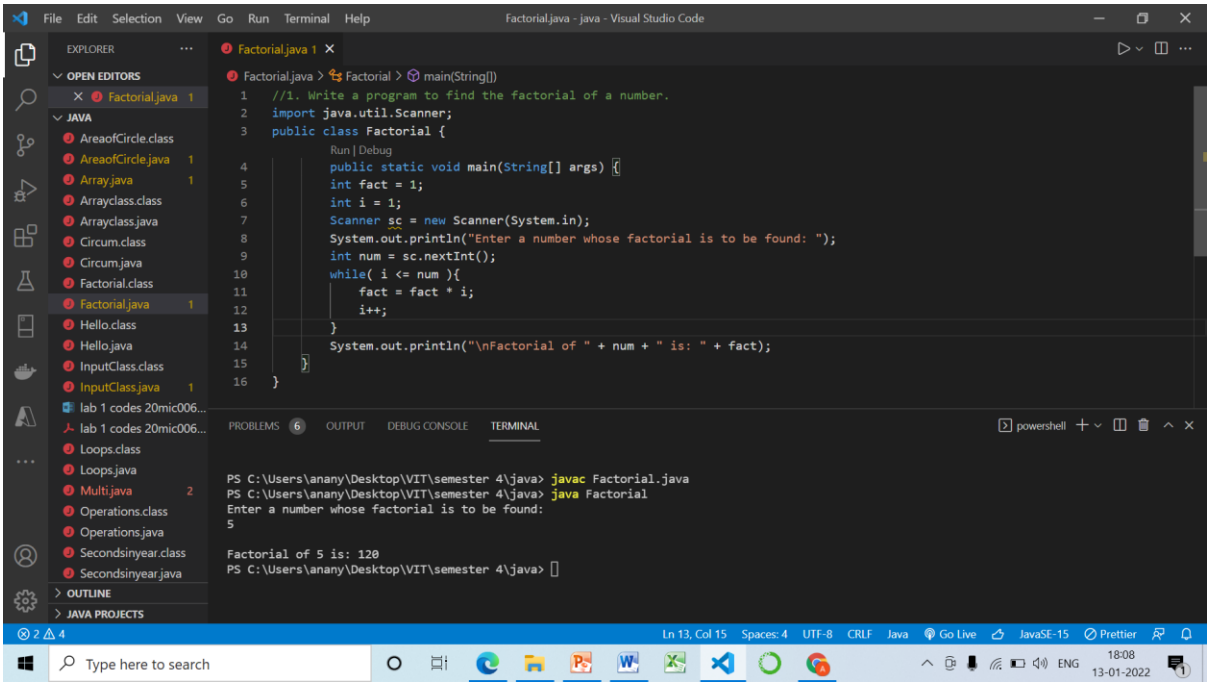
20MIC0063

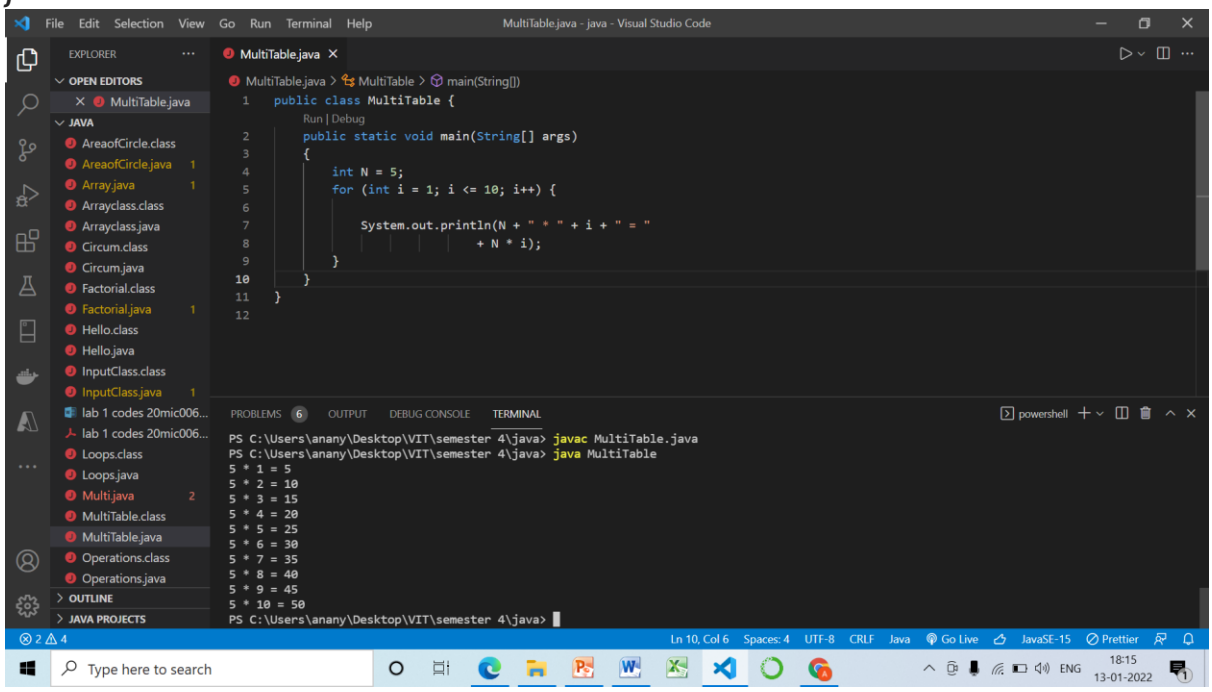
1. Write a program to find the factorial of a number.

```
import java.util.Scanner;
public class Factorial {
        public static void main(String[] args) {
        int fact = 1;
        int i = 1;
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter a number whose factorial is to be found: ");
        int num = sc.nextInt();
        while( i <= num ){
           fact = fact * i;
           i++;
        }
        System.out.println("\nFactorial of " + num + " is: " + fact);
    }
}
```



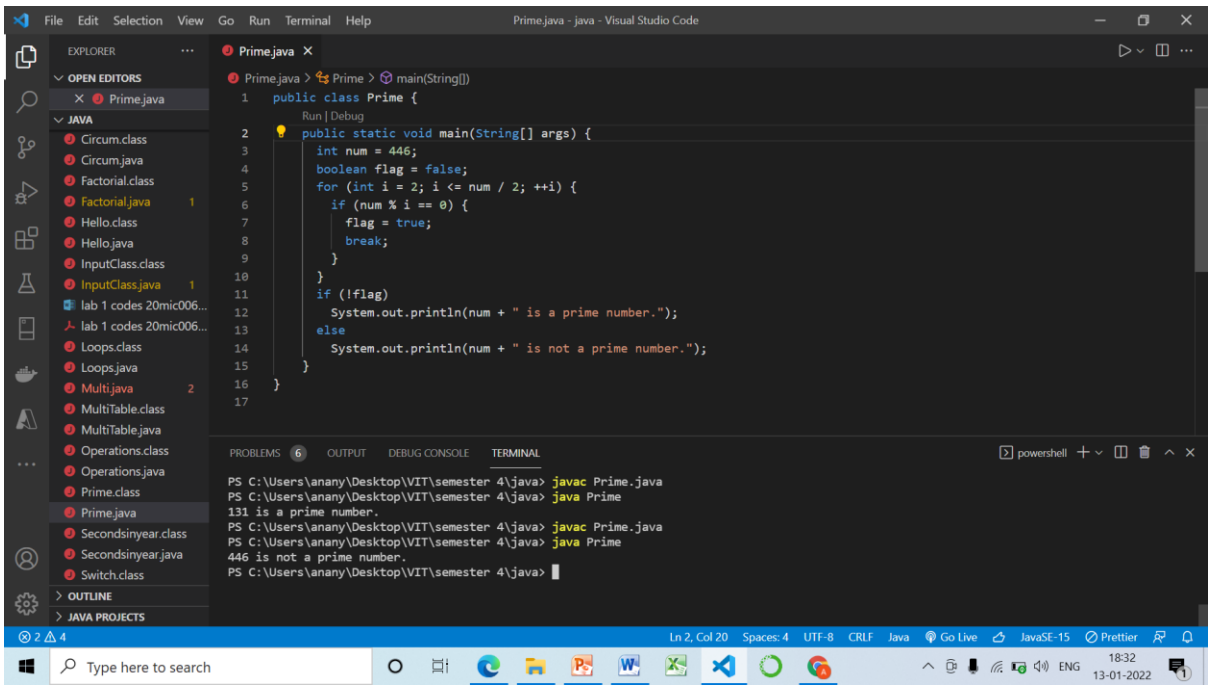
2. Write a program to print the multiplication table of a number.

```
public class MultiTable {
    public static void main(String[] args)
        {
            int N = 5;
            for (int i = 1; i <= 10; i++) {

                System.out.println(N + " * " + i + " = "
                                                + N * i);
            }
        }
}
```



3. Write a program to check whether the given number is a prime number or not

```
public class Prime {
   public static void main(String[] args) {
     int num = 446;
     boolean flag = false;
     for (int i = 2; i <= num / 2; ++i) {
       if (num % i == 0) {
         flag = true;
         break;
       }
     }
     if (!flag)
       System.out.println(num + " is a prime number.");
     else
       System.out.println(num + " is not a prime number.");
   }
}
```



4. Write a program to generate the following patterns.

i)

1

1 2

1 2 3

1 2

1

ii)

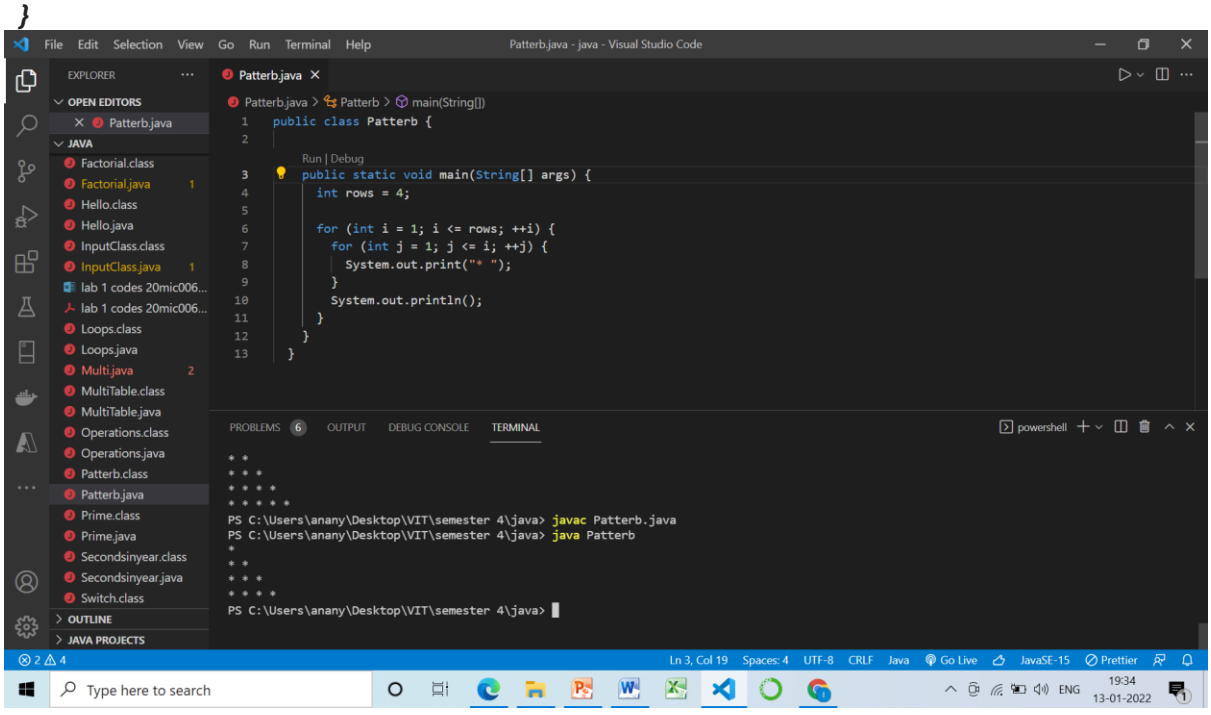
*

* *

* * *

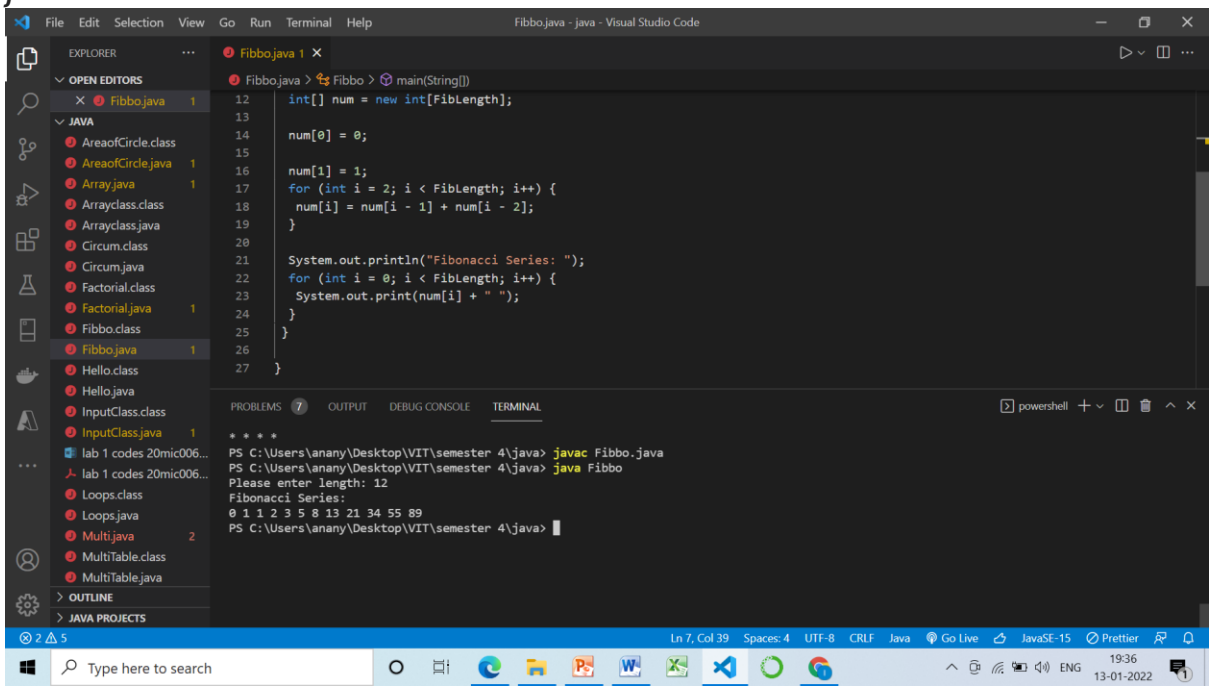
* * * *

```
public class Patterb {

   public static void main(String[] args) {
     int rows = 4;

     for (int i = 1; i <= rows; ++i) {
       for (int j = 1; j <= i; ++j) {
         System.out.print("* ");
       }
       System.out.println();
     }
   }
 }
```



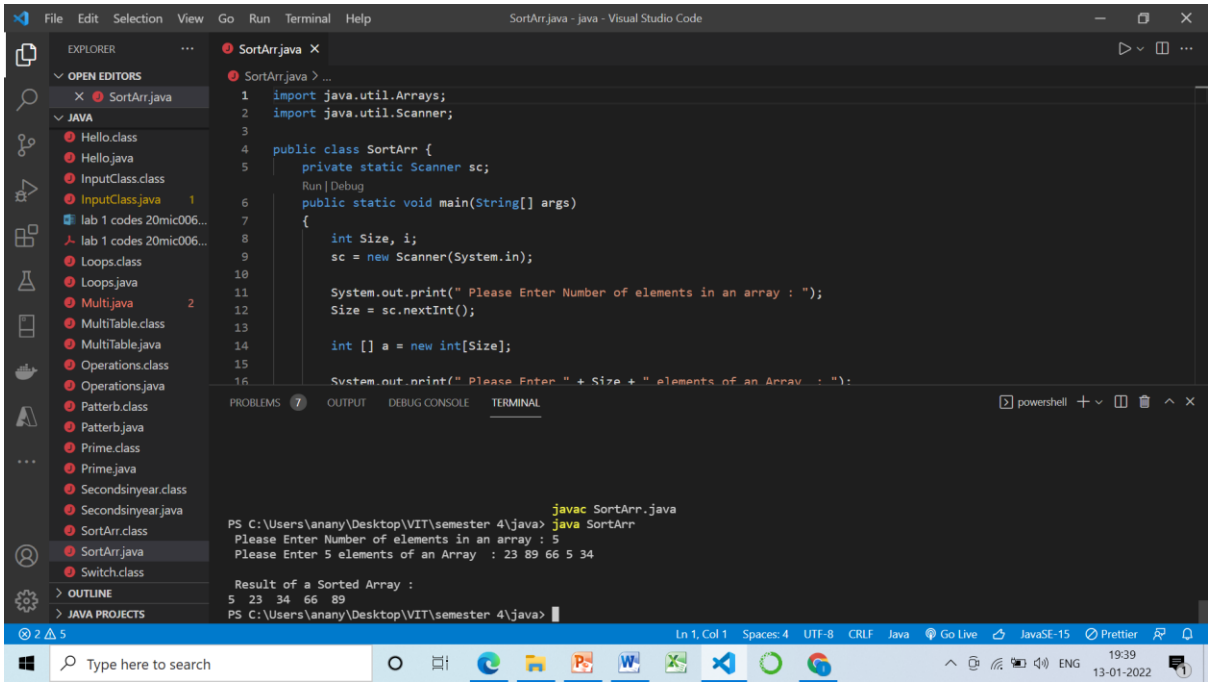
5. Write a program to generate the Fibonacci series.

```
import java.util.Scanner;

public class Fibbo {

 public static void main(String[] args) {
  int FibLength;
  Scanner sc = new Scanner(System.in);

  System.out.print("Please enter length: ");
  FibLength = sc.nextInt();

  int[] num = new int[FibLength];

  num[0] = 0;

  num[1] = 1;
  for (int i = 2; i < FibLength; i++) {
   num[i] = num[i - 1] + num[i - 2];
  }

  System.out.println("Fibonacci Series: ");
  for (int i = 0; i < FibLength; i++) {
   System.out.print(num[i] + " ");
  }
 }

}
```



6. Write a program to sort n numbers in ascending order.

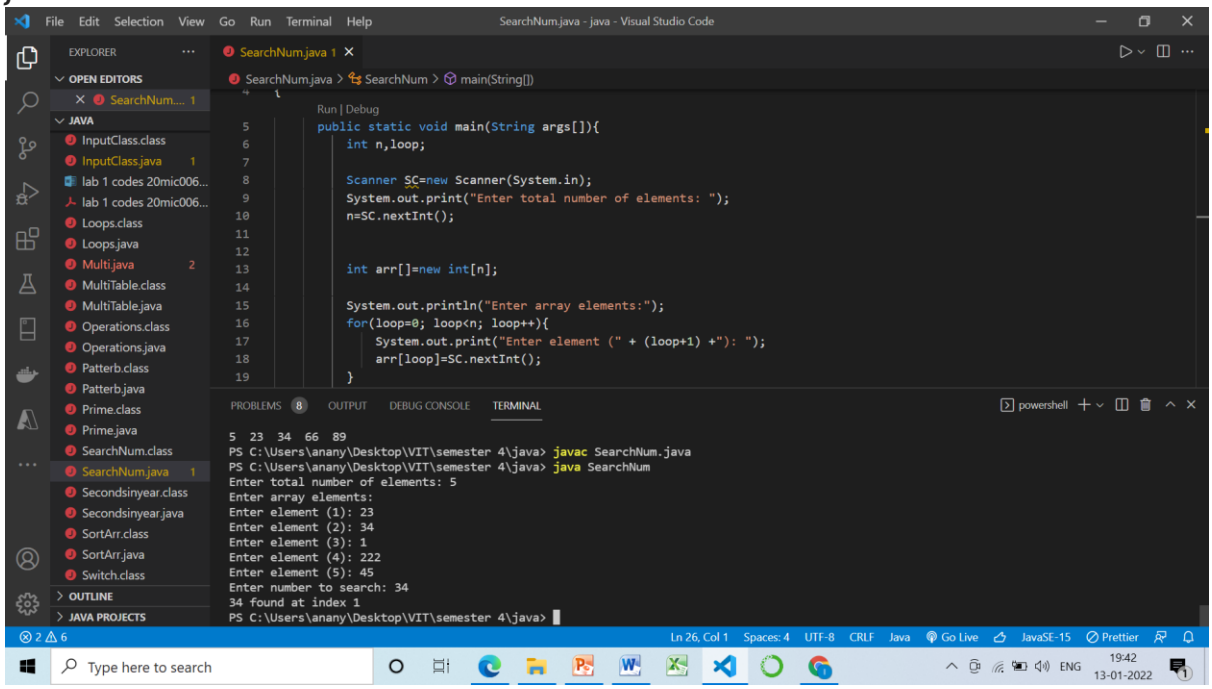
```
import java.util.Arrays;
import java.util.Scanner;

public class SortArr {
	private static Scanner sc;
	public static void main(String[] args)
	{
		int Size, i;
		sc = new Scanner(System.in);

		System.out.print(" Please Enter Number of elements in an array : ");
		Size = sc.nextInt();

		int [] a = new int[Size];

		System.out.print(" Please Enter " + Size + " elements of an Array  : ");
		for (i = 0; i < Size; i++)
		{
			a[i] = sc.nextInt();
		}

		Arrays.sort(a);

		System.out.println("\n Result of a Sorted Array :  ");
		for (int Number: a)
		{
			System.out.print(Number + "  ");
		}
	}
}
```



7. Write a program to search a number among n numbers

```
import java.util.*;

public class SearchNum
{
        public static void main(String args[]){
                int n,loop;

                Scanner SC=new Scanner(System.in);
                System.out.print("Enter total number of elements: ");
                n=SC.nextInt();


                int arr[]=new int[n];

                System.out.println("Enter array elements:");
                for(loop=0; loop<n; loop++){
                        System.out.print("Enter element (" + (loop+1) +"): ");
                        arr[loop]=SC.nextInt();
                }


                int num;
                System.out.print("Enter number to search: ");
                num=SC.nextInt();


                int index=-1;
```

```
            for(loop=0;loop<n;loop++){
                if(arr[loop]==num){
                    index=loop;
                    break;
                }
            }

            if(index==-1){
                System.out.println("Sorry! " + num + " is not found in array.");
            }
            else{
                System.out.println(num + " found at index " + index);
            }

            SC.close();
        }
}
```



8. Write a program to read ‘n’ numbers and print their sum and average.

```
import static java.lang.Float.sum;
import java.util.Scanner;
public class Avgsum {
  public static void main(String[] args)
   {
    int n, count = 1;
    float  xF, averageF, sumF = 0;
    Scanner sc = new Scanner(System.in);
    System.out.println("Enter the value of n");
    n = sc.nextInt();
    while (count <= n)
```

```
        {
            System.out.println("Enter the "+count+" number?");
            xF = sc.nextInt();
            sumF += xF;
            ++count;
        }
            averageF = sumF/n;
            System.out.println("The Sum is"+sumF);
    System.out.println("The Average is"+averageF);
  }
}
```