Assignment-5

1.Write a program to swap two numbers in Java.

Code:

Swap.java

```java
package com.tecnotree.Assignment5;

public class Swap {

    public static void main(String[] args) {
        int a=10;
        int b=4;
        int temp;
        System.out.println("Before Swaping a="+a+" b="+ b);
        temp = a;
        a=b;
        b = temp;
        System.out.println("After Swaping a="+a+" b="+ b);

    }

}
```

Codeshare Link: https://codeshare.io/Rbv134

Output:

```
Before Swaping a=10 b=4
After Swaping a=4 b=10
```

2.Write a program to print all the elements of the Fibonacci series.

Code:

Fibonacci.java

```java
package com.tecnotree.Assignment5;

public class Fibonacci {
    public static int Fib(int n) {
        if(n<=1) {
            return n;
        }
        else {
        return Fib(n-1) + Fib(n-2);
        }
    }
    public static void main(String[] args) {
        int n=10;
        System.out.println("The Fibonacci Series is "+Fib(n));

    }
}
```

Codeshare Link: https://codeshare.io/j0dRQD

Output:

```
The Fibonacci Series is 55
```

3.Check if a given number is palindrome or not.

Code:

Palindrome.java

```java
package com.tecnotree.Assignment5;

public class Palindrome {

    public static void main(String[] args) {
        int digit,n=121,rev=0;
        int old_num = n;
        while(n>0) {
            digit = n % 10;
            n = n /10;
            rev = (rev*10)+digit;
        }
        if(old_num == rev) {
            System.out.println("The Given Number "+ old_num + " is Palindrome");
        }
        else {
            System.out.println("The Given Number "+ old_num + " is not Palindrome");
        }
    }

}
```

Codeshare Link: https://codeshare.io/0gvXke

Output:

```
The Given Number 121 is Palindrome
```

4.Write a program to find whether a number is an Armstrong number or not.

Code:

Armstrong.java

```java
package com.tecnotree.Assignment5;

public class Armstrong {

    public static void main(String[] args) {
        int n= 153,sum =0,digit;
        int old_num = n;
        while(n>0) {
            digit = n % 10;
            n = n /10;
            sum = sum + (digit*digit*digit);
        }
        if(old_num == sum)
            System.out.println("The Given number "+ old_num + " is Armstrong Number");
        else
            System.out.println("The Given number "+ old_num + " is not Armstrong Number");

    }

}
```

Codeshare Link: https://codeshare.io/9OLdJ7

Output:

```
The Given number 153 is Armstrong Number
```

5.Find the GCD of two numbers.

Code:

GCD.java

```java
package com.tecnotree.Assignment5;

public class GCD {

    public static void main(String[] args) {
        int num1= 20,num2=10;
        int temp;
        while(num2!=0) {
            temp = num2;
            num2 =num1 % num2;
            num1 = temp;
        }
        System.out.println("The Gcd is:"+num1);
    }


}
```

Codeshare Link: https://codeshare.io/N3pv8J

Output:

```
The Gcd is:10
```

6 .Write a program to find the sum of n natural numbers.

Code:

SumofN.java

```java
package com.tecnotree.Assignment5;

public class SumofN {

    public static void main(String[] args) {
        int n =6,sum=0;
        sum = (n*(n+1))/2;
        System.out.println("The Sum of Natural Number is:"+ sum);

    }

}
```

Codeshare Link: https://codeshare.io/WdEqrE

Output:

```
The Sum of Natural Number is:21
```

7.Write a program to find the lcm of two numbers.

Code:

Lcm.java

```java
package com.tecnotree.Assignment5;

public class Lcm {
    public static void main(String[] args) {
        int num1 = 24;
        int num2 = 36;
        int gcd;
        gcd = gcd(num1,num2);
        int lcm;
        lcm = (num1*num2)/gcd;
        System.out.println("The Lcm is "+lcm);
    }
    public static int gcd(int num1,int num2) {
        int temp;
        while(num2!=0) {
            temp = num2;
            num2 =num1 % num2;
            num1 = temp;
        }
        return num1;
    }
}
```

Codeshare Link: https://codeshare.io/4eo6r4

Output:

```
The Lcm is 72
```

8.Calculate the sum of digits of a given number.

Code:

SumOfD.java

```java
package com.tecnotree.Assignment5;

public class SumOfD {

    public static void main(String[] args) {
        int digit,n=77,sum=0;
        int old_num = n;
        while(n>0) {
            digit = n % 10;
            n = n /10;
            sum = sum + digit;
        }
        System.out.println("Sum of the Digit "+old_num+" is "+sum);


    }

}
```

Codeshare Link: https://codeshare.io/EBEjON

Output:

```
Sum of the Digit 77 is 14
```

9.Write a program to reverse a string using string buffer class.

Code:

Question9.java

```java
package com.tecnotree.Assignment5;

public class StringReverse {
       public static void main(String[] args) {
           StringBuffer sb = new StringBuffer("Mohammed Fawaz");
           System.out.println("string: " + sb);
           // reversing of string buffer
           System.out.println("reverse: " + sb.reverse());
       }
}
```

Codeshare Link: https://codeshare.io/oQ38qo

Output:

```
string: Mohammed Fawaz
reverse: zawaF demmahoM
```

10.Write a code to print all the first n prime numbers where n will be given as input.

Code:

Prime.java

```
1  package com.tecnotree.Assignment5;
2
3
4  import java.util.Scanner;
5
6  public class Prime
7  {
8      public static void main(String arg[])
9      {
10     int i,counter;
11                 System.out.print("Enter value of n : ");
12     Scanner sc=new Scanner(System.in);
13     int n=sc.nextInt();
14                 System.out.println("Prime numbers between 1 to "+n+" are ");
15     for(int j=2;j<=n;j++)
16     {
17     counter=0;
18     for(i=1;i<=j;i++)
19     {
20        if(j%i==0)
21        {
22             counter++;
23        }
24     }
25     if(counter==2)
26            System.out.print(j+"  ");
27     }
28     sc.close();
29     }
30 }
```

Codeshare Link: https://codeshare.io/1Y8OmB

Output:

```
Enter value of n : 10
Prime numbers between 1 to 10 are
2  3  5  7
```