

## Assinment 5

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

Before swapping:

a = 7

b = 14

After swapping:

a = 14

b = 7

```
add.java  fibbonac.java  assignment.java  exampl1.java x  A36.java  A39.java  A30.java  A41.java  »33  □
1 package example;
2
3 public class exampl1 {
4     public static void main(String[] args) {
5         int a = 7;
6         int b = 14;
7         System.out.println("Before swapping:");
8         System.out.println("a = " + a);
9         System.out.println("b = " + b);
10        int z = a; a = b;
11        b = z;
12        System.out.println("After swapping:"); System.out.println("a = " + a); System.out.println("b = " + b);
13    }
14
15
16 }
17
```

Codeshare link :

<https://codeshare.io/PdEIDQ>

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

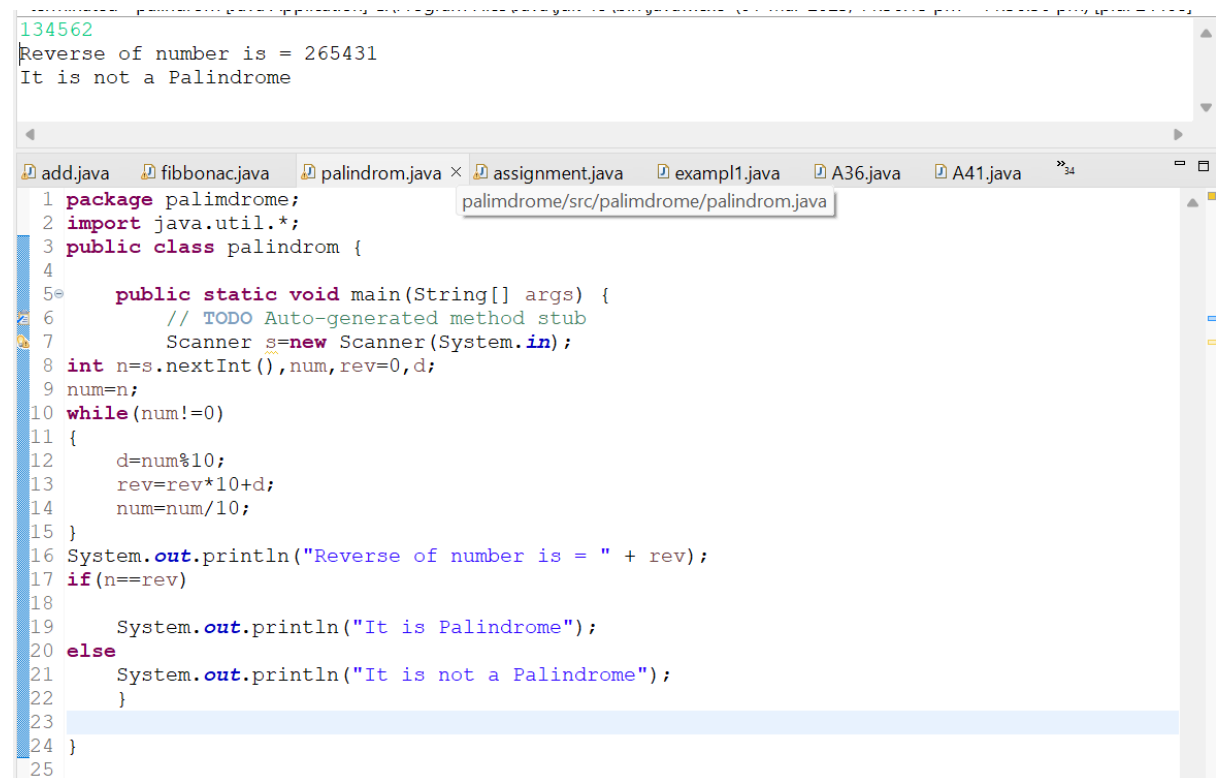
```
Enter the number of terms to generate in the Fibonacci series: 9
Fibonacci series up to null terms: 0 1 1 2 3 5 8 13 21

add.java  fibbonac.java x  assignment.java  exampl1.java  A36.java  A39.java  A30.java  A41.java  »33  □
1 package fibonacci;
2 import java.util.*;
3 public class fibbonac {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         Scanner s= new Scanner(System.in);
8         System.out.print("Enter the number of terms to generate in the Fibonacci series: ");
9         int n = s.nextInt();
10        int prev = 0, next = 1, sum = 0;
11        String numTerms = null;
12        System.out.print("Fibonacci series up to " + numTerms + " terms: ");
13        for (int i = 1; i <= n; i++) {
14            System.out.print(prev + " ");
15            sum = prev + next;
16            prev = next;
17            next = sum;
18        }
19    }
20
21 }
22
```

Codeshare link : <https://codeshare.io/JbMnBE>

### 3. Write a Java program to check whether a given number is palindrome or not.

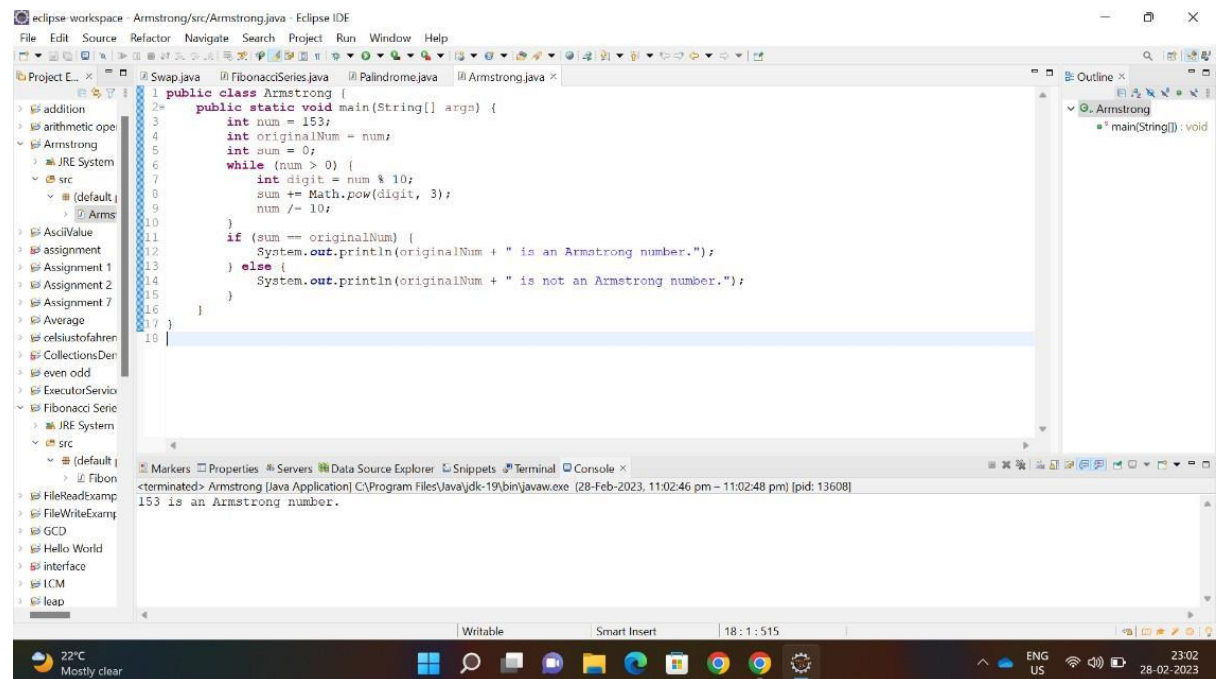
```
134562
Reverse of number is = 265431
It is not a Palindrome
```



```
1 package palimdrome;
2 import java.util.*;
3 public class palindrom {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         Scanner s=new Scanner(System.in);
8         int n=s.nextInt(),num,rev=0,d;
9         num=n;
10        while(num!=0)
11        {
12            d=num%10;
13            rev=rev*10+d;
14            num=num/10;
15        }
16        System.out.println("Reverse of number is = " + rev);
17        if(n==rev)
18            System.out.println("It is Palindrome");
19        else
20            System.out.println("It is not a Palindrome");
21        }
22    }
23
24 }
25 }
```

Codeshare link : <https://codeshare.io/K8Ebq8>

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

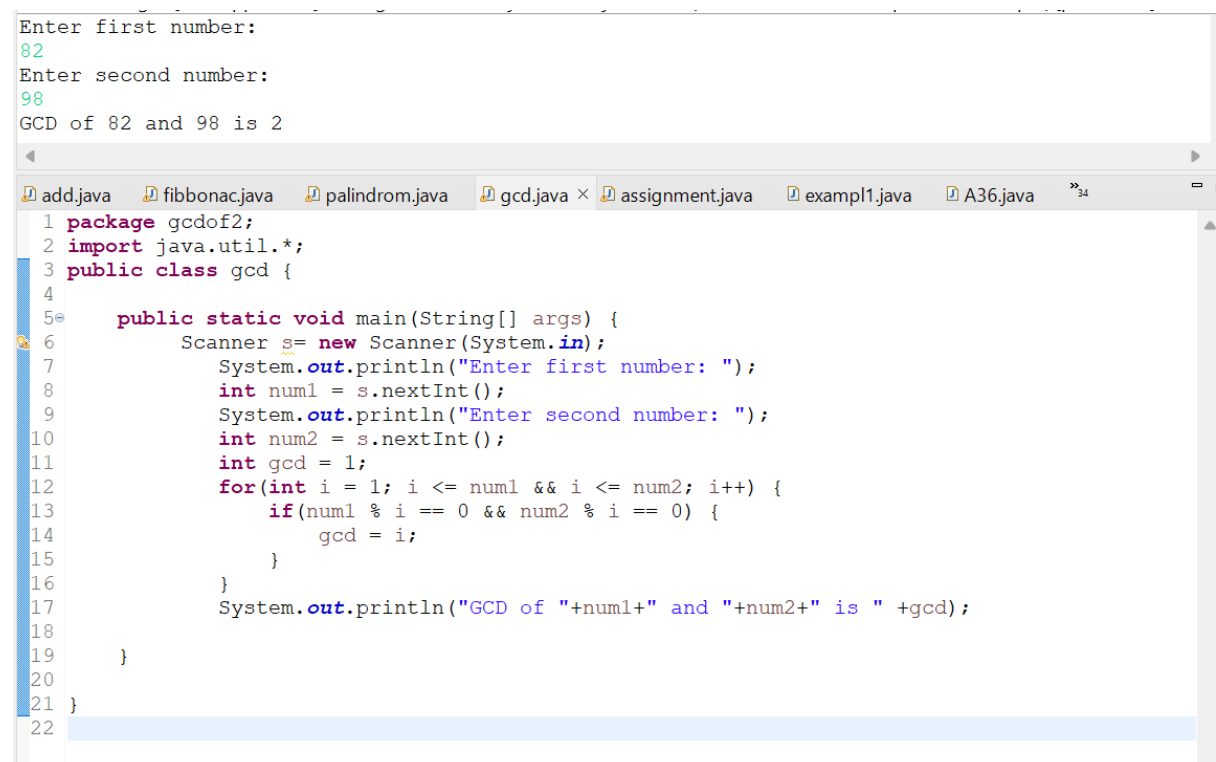


```
1 public class Armstrong {
2     public static void main(String[] args) {
3         int num = 153;
4         int originalNum = num;
5         int sum = 0;
6         while (num > 0) {
7             int digit = num % 10;
8             sum += Math.pow(digit, 3);
9             num /= 10;
10        }
11        if (sum == originalNum) {
12            System.out.println(originalNum + " is an Armstrong number.");
13        } else {
14            System.out.println(originalNum + " is not an Armstrong number.");
15        }
16    }
17 }
18 }
```

Console output: 153 is an Armstrong number.

Codeshare link : <https://codeshare.io/yo0EVw>

#### 5. Write a Java program to find the GCD of two numbers.



```
1 package gcdof2;
2 import java.util.*;
3 public class gcd {
4
5     public static void main(String[] args) {
6         Scanner s = new Scanner(System.in);
7         System.out.println("Enter first number: ");
8         int num1 = s.nextInt();
9         System.out.println("Enter second number: ");
10        int num2 = s.nextInt();
11        int gcd = 1;
12        for(int i = 1; i <= num1 && i <= num2; i++) {
13            if(num1 % i == 0 && num2 % i == 0) {
14                gcd = i;
15            }
16        }
17        System.out.println("GCD of "+num1+" and "+num2+" is " +gcd);
18    }
19 }
20
21 }
22 }
```

Codeshare link : <https://codeshare.io/DZEwqm>

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

```
Enter a positive integer n: 8
The sum of the first 8 natural numbers is: 36
```

```
1 package sumofn;
2 import java.util.*;
3 public class sum {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         Scanner s = new Scanner(System.in);
8         System.out.print("Enter a positive integer n: ");
9         int n = s.nextInt();
10        int sum = 0;
11        for (int i = 1; i <= n; i++) {
12            sum += i;
13        }
14        System.out.println("The sum of the first " + n + " natural numbers is: " + sum);
15    }
16 }
```

Codeshare link : <https://codeshare.io/YLE9eQ>

## 7. Write a Java program to find the LCM of two numbers.

```
Enter first number:
34
Enter second number:
42
LCM of 34 and 42 is 2714
```

```
1 package lcmof2;
2 import java.util.*;
3 public class lcm {
4     public static void main(String[] args) {
5         Scanner s = new Scanner(System.in);
6         System.out.println("Enter first number: ");
7         int num1 = s.nextInt();
8         System.out.println("Enter second number: ");
9         int num2 = s.nextInt();
10        int lcm;
11        if(num1 > num2) {
12            lcm = num1;
13        } else {
14            lcm = num2;
15        }
16        while(true) {
17            if(lcm % num1 == 0 && lcm % num2 == 0) {
18                System.out.println("LCM of " + num1 + " and " + num2 + " is " + lcm);
19                break;
20            }
21            lcm++;
22        }
23    }
24 }
25 }
26 }
```

Codeshare link : <https://codeshare.io/wnvEV7>

## 8. Write a Java program to calculate the sum of digits of a given number.

```
Enter a positive integer: 5467
The sum of the digits is: 22
```

```
1 package sumofdigits;
2 import java.util.*;
3 public class sum {
4
5     public static void main(String[] args) {
6         Scanner s = new Scanner(System.in);
7         System.out.print("Enter a positive integer: ");
8         int num = s.nextInt();
9         int sum = 0;
10        while (num > 0) {
11            sum = sum + num % 10;
12            num = num / 10;
13        }
14        System.out.println("The sum of the digits is: " + sum);
15    }
16 }
17
18 }
19 }
```

Codeshare link : <https://codeshare.io/r9lE17>

## 9. Write a Java program to reverse a string.

```
StringReverse.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help

1 public class StringReverse {
2     public static void main(String[] args) {
3         String str = "SUSHMA";
4         String reversedStr = reverseString(str);
5         System.out.println("Original string: " + str);
6         System.out.println("Reversed string: " + reversedStr);
7     }
8     public static String reverseString(String str) {
9         StringBuilder sb = new StringBuilder(str);
10        sb.reverse();
11        return sb.toString();
12    }
13 }
14 }
```

StringReverse

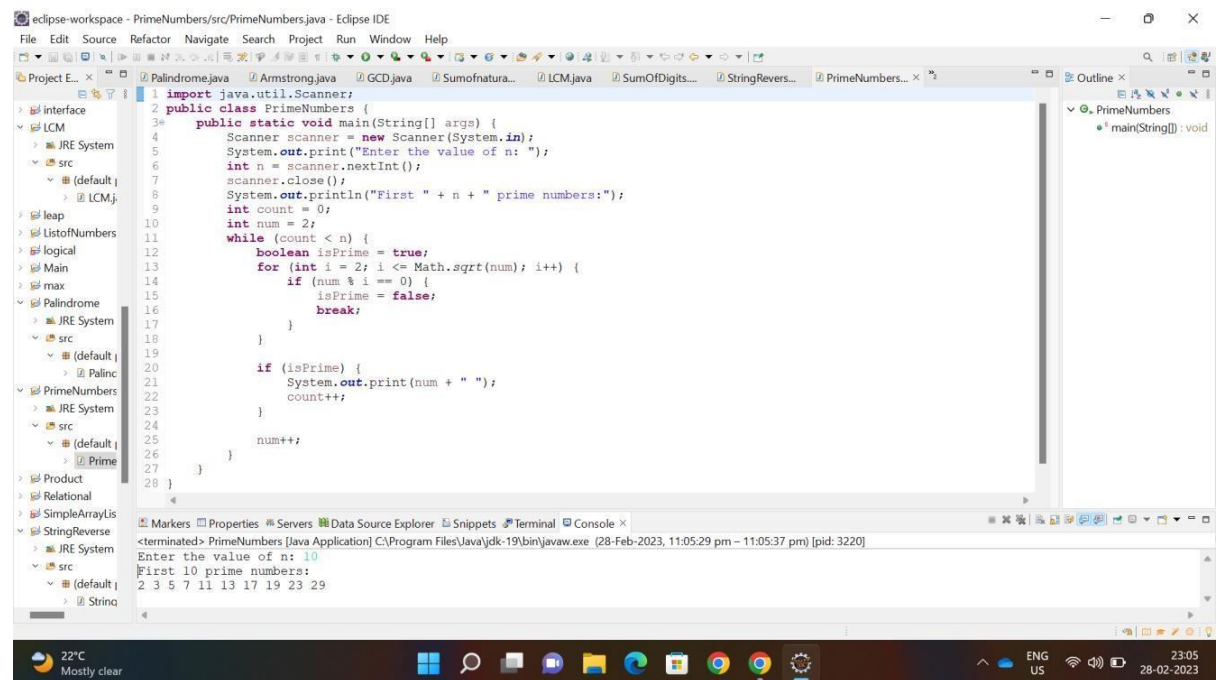
- main(String[]): void
- reverseString(String): String

StringReverse (Java Application) C:\Program Files\Java\jdk-19\bin\javaw.exe (28-Feb-2023, 11:04:43 pm - 11:04:44 pm) [pid: 10592]

Original string: SUSHMA  
Reversed string: AMHSUS

Codeshare link : <https://codeshare.io/gL9E1V>

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



```
1 import java.util.Scanner;
2 public class PrimeNumbers {
3     public static void main(String[] args) {
4         Scanner scanner = new Scanner(System.in);
5         System.out.print("Enter the value of n: ");
6         int n = scanner.nextInt();
7         scanner.close();
8         System.out.println("First " + n + " prime numbers:");
9         int count = 0;
10        int num = 2;
11        while (count < n) {
12            boolean isPrime = true;
13            for (int i = 2; i <= Math.sqrt(num); i++) {
14                if (num % i == 0) {
15                    isPrime = false;
16                    break;
17                }
18            }
19            if (isPrime) {
20                System.out.print(num + " ");
21                count++;
22            }
23            num++;
24        }
25    }
26 }
27
28 }
```

Console Output:

```
<terminated> PrimeNumbers [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (28-Feb-2023, 11:05:29 pm - 11:05:37 pm) [pid: 3220]
Enter the value of n: 10
First 10 prime numbers:
2 3 5 7 11 13 17 19 23 29
```

Codeshare link : <https://codeshare.io/xv4E1X>