WEEK 6

1. Write a Java program to print the odd numbers from 1 to 99.

```java
public class week6_1 {
    public static void main(String[] args) {
        for (int i = 1; i < 100; i+=2)
            System.out.println(i);
    }
}
```

```
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79 81 83 85 87 89 91 93 95 97 99
Process finished with exit code 0
```

2. Write a Java program to check whether a number is prime or not.

```java
import java.util.Scanner;

public class week6_2 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter a number :");
        int n = sc.nextInt();
        boolean flag = true;
        for (int i = 2; i < n; i++)
            if (n % i == 0) {
                flag = false;
                break;
            }
        if (flag) System.out.println("Prime");
        else System.out.println("Not Prime");
    }
}
```

```
"C:\Program Files\Java\
Enter a number :
41
Prime
```

3. Write a Java program to swap the first and last elements of an array.

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week6_1.java week6_2.java week6_3.java week6_4.java

```java
import java.util.Scanner;

public class week6_3 {  Stephen047
    public static void main(String[] args) {  Stephen047
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter length of Array :");
        int l = sc.nextInt();
        int[] arr = new int[l];
        System.out.println("Enter the elements :");
        for(int i=0;i<l;i++) arr[i] = sc.nextInt();
        System.out.println("Current Array :");
        for(int i=0;i<l;i++) System.out.print(arr[i]+", ");
        System.out.println();
        int temp = arr[l - 1];
        arr[l - 1] = arr[0];
        arr[0] = temp;
        System.out.println("After swap :");
        for(int i=0;i<l;i++) System.out.print(arr[i]+", ");
    }
}
```

```
Enter length of Array :
5
Enter the elements :
1 2 3 4 5
Current Array :
1, 2, 3, 4, 5,
After swap :
5, 2, 3, 4, 1,
Process finished with exit code 0
```

4. Write a Java program to find the maximum and minimum among array elements.

week6_1.java week6_2.java week6_3.java week6_4.java

```java
import java.util.Scanner;

public class week6_4 {  Stephen047
    public static void main(String[] args) {  Stephen047
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter length of Array :");
        int l = sc.nextInt();
        int[] arr = new int[l];
        System.out.println("Enter the elements :");
        int max=0, min=0;
        for(int i=0;i<l;i++) {
            arr[i] = sc.nextInt();
            if(i==0) {
                max = arr[i];
                min = arr[i];
            }
            if(arr[i] > max) max = arr[i];
            if(arr[i] < min) min = arr[i];
        }
        System.out.println("Biggest element = "+max);
        System.out.println("Smallest element = "+min);
    }
}
```

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```
Enter length of Array :
5
Enter the elements :
21 54 67 98 21
Biggest element = 98
Smallest element = 21
```

5. Write a Java program to print all prime numbers between 0 to 100.

week6_1.java | week6_2.java | week6_3.java | week6_4.java | week

```java
public class week6_5 {  Stephen047 *
    public static void main(String[] args) {  Stephen047 *
        Outer : for (int i=0; i<=100; i++){
            if (i == 0 || i == 1) continue;
            for (int j=2; j<i; j++) if (i%j == 0) continue Outer;
            System.out.print(i+" ");
        }
    }
}
```

```
2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97
Process finished with exit code 0
```

6. Write a Java program to implement linear search.

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week6_1.java week6_2.java week6_3.java week6_4.java

```java
import java.util.Scanner;

public class week6_6 {  Stephen047
    public static void main(String[] args) {  Stephen047
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter length of Array :");
        int l = sc.nextInt();
        int[] arr = new int[l];
        System.out.println("Enter the elements :");
        for(int i=0;i<l;i++) arr[i] = sc.nextInt();
        System.out.println("Enter target :");
        int x = sc.nextInt();
        boolean flag = false;
        int i;
        for(i=0; i<l; i++)
            if (x == arr[i]){
                flag = true;
                break;
            }
        if (flag) System.out.println("Found at index "+i);
        else System.out.println("Not found");
    }
}
```

```
Enter length of Array :
5
Enter the elements :
5 6 4 9 10
Enter target :
9
Found at index 3
```

7. Write a Java program to print all prime numbers between 0 to 100.

week6_6.java week6_7.java × week6_8.java week6_9.java week6_

```java
public class week6_7 {  Stephen047 *
    public static void main(String[] args) {  Stephen047 *
        Outer : for (int i=0; i<=100; i++){
            if (i == 0 || i == 1) continue;
            for (int j=2; j<i; j++) if (i%j == 0) continue Outer;
            System.out.print(i+" ");
        }
    }
}
```

```
"C:\Program Files\Java\jdk-17\bin\java.exe" "-javaagent:C:\Program Files\
2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97
Process finished with exit code 0
```

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8. Write a Java program to find the second largest element in an array.

week6_6.java | week6_7.java | week6_8.java | week6_9.ja

```java
import java.util.Scanner;

public class week6_8 {  Stephen047
    public static void main(String[] args) {  Stephen047
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter length of Array :");
        int l = sc.nextInt();
        int[] arr = new int[l];
        System.out.println("Enter the elements :");
        int maxi =0;
        for(int i=0;i<l;i++) {
            arr[i] = sc.nextInt();
            if(arr[i] > arr[maxi]) maxi = i;
        }
        int m2 =arr[0];
        for(int i=0;i<l;i++) {
            if(i == maxi) continue;
            if(arr[i] > m2) m2 = arr[i];
        }
        System.out.println("2nd Biggest : "+m2);
    }
}
```

```
"C:\Program Files\Java\jdk-17\bin\java.exe" "-j
Enter length of Array :
5
Enter the elements :
21 48 56 19 18
2nd Biggest : 48
```

9. Write a program to implement Fibonacci series up to N terms.

WEEK 6

week6_6.java | week6_7.java | week6_8.java | week6_9.java | week

```java
import java.util.Scanner;

public class week6_9 {  Stephen047
    public static void main(String[] args) {  Stephen047
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter N :");
        int n = sc.nextInt();
        if (n >= 1) System.out.print("0 ");
        if (n >= 2) System.out.print("1 ");
        if (n >= 3){
            int a = 0, b = 1;
            int c;
            for (int i = 2; i <= n; i++){
                c = a+b;
                a = b;
                b = c;
                System.out.print(c+" ");
            }
        }
    }
}
```

```
Enter N :
10
0 1 1 2 3 5 8 13 21 34 55
Process finished with exit code 0
```

10. Write a Java program to reverse all elements of an array.

```
Enter length of Array :
5
Enter the elements :
1 2 3 4 5
Current Array :
1, 2, 3, 4, 5,
Current Array :
5, 4, 3, 2, 1,
Process finished with exit code 0
```

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week6_6.java week6_7.java week6_8.java week6_9.java

```java
import java.util.Scanner;

public class week6_10 {  Stephen047
    public static void main(String[] args) {  Stephen047
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter length of Array :");
        int l = sc.nextInt();
        int[] arr = new int[l];
        System.out.println("Enter the elements :");
        for(int i=0;i<l;i++) arr[i] = sc.nextInt();
        System.out.println("Current Array :");
        for(int i=0;i<l;i++) System.out.print(arr[i]+", ");
        System.out.println();
        for (int i=0;i<l/2;i++){
            int temp = arr[i];
            arr[i] = arr[l-1-i];
            arr[l-1-i] = temp;
        }
        System.out.println("Current Array :");
        for(int i=0;i<l;i++) System.out.print(arr[i]+", ");
    }
}
```

11. Write a Java program to find the frequency of each character in a given string.

week6_6.java week6_7.java week6_8.java week6_9.java week6_10.java

```java
import java.util.Scanner;

public class week6_11 {  Stephen047
    public static void main(String[] args) {  Stephen047
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter String :");
        String str = sc.nextLine();
        for (int i = 0; i < str.length(); i++){
            char c = str.charAt(i);
            int count = 0;
            for (int j = 0; j < str.length(); j++) if (str.charAt(j) == c) count++;
            System.out.println("Freq of "+c+" = "+count);
        }
    }
}
```

```
Enter String :
Shafin
Freq of S = 1
Freq of h = 1
Freq of a = 1
Freq of f = 1
Freq of i = 1
Freq of n = 1
```