

WEEK 6

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

```
week6_1.java
1 public class week6_1 { Stephen047
2     public static void main(String[] args) { Stephen047
3         for (int i = 1; i < 100; i+=2)
4             System.out.println(i);
5     }
6 }
7 |
```

```
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.

```
week6_2.java
1 import java.util.Scanner;
2
3 public class week6_2 { Stephen047
4     public static void main(String[] args) { Stephen047
5         Scanner sc = new Scanner(System.in);
6         System.out.println("Enter a number :");
7         int n = sc.nextInt();
8         boolean flag = true;
9         for (int i = 2; i < n; i++)
10             if (n % i == 0) {
11                 flag = false;
12                 break;
13             }
14         if (flag) System.out.println("Prime");
15         else System.out.println("Not Prime");
16     }
17 }
18 |
```

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

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

WEEK 6

```
1 import java.util.Scanner;
2
3 public class week6_3 {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.println("Enter length of Array :");
7         int l = sc.nextInt();
8         int[] arr = new int[l];
9         System.out.println("Enter the elements :");
10        for(int i=0;i<l;i++) arr[i] = sc.nextInt();
11        System.out.println("Current Array :");
12        for(int i=0;i<l;i++) System.out.print(arr[i]+", ");
13        System.out.println();
14        int temp = arr[l - 1];
15        arr[l - 1] = arr[0];
16        arr[0] = temp;
17        System.out.println("After swap :");
18        for(int i=0;i<l;i++) System.out.print(arr[i]+", ");
19    }
20 }
21
```

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.

```
1 import java.util.Scanner;
2
3 public class week6_4 {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.println("Enter length of Array :");
7         int l = sc.nextInt();
8         int[] arr = new int[l];
9         System.out.println("Enter the elements :");
10        int max=0, min=0;
11        for(int i=0;i<l;i++) {
12            arr[i] = sc.nextInt();
13            if(i==0) {
14                max = arr[i];
15                min = arr[i];
16            }
17            if(arr[i] > max) max = arr[i];
18            if(arr[i] < min) min = arr[i];
19        }
20        System.out.println("Biggest element = "+max);
21        System.out.println("Smallest element = "+min);
22    }
23 }
```

WEEK 6

```
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.

The screenshot shows a code editor with several files listed in the header: week6_1.java, week6_2.java, week6_3.java, week6_4.java, and week6_5.java. The week6_5.java file is open and contains the following Java code:

```
1 public class week6_5 { Stephen047*  
2     public static void main(String[] args) { Stephen047*  
3         Outer : for (int i=0; i<=100; i++){  
4             if (i == 0 || i == 1) continue;  
5             for (int j=2; j<i; j++) if (i%j == 0) continue Outer;  
6             System.out.print(i+" ");  
7         }  
8     }  
9 }  
10
```

Below the code editor is a terminal window showing the output of the program:

```
c:\Program Files\Java\jdk-17\bin\java.exe -javadebugger 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
```

- 6.** Write a Java program to implement linear search.

WEEK 6

```
week6_1.java week6_2.java week6_3.java week6_4.java
1 import java.util.Scanner;
2
3 public class week6_6 { Stephen047
4     public static void main(String[] args) { Stephen047
5         Scanner sc = new Scanner(System.in);
6         System.out.println("Enter length of Array :");
7         int l = sc.nextInt();
8         int[] arr = new int[l];
9         System.out.println("Enter the elements :");
10        for(int i=0;i<l;i++) arr[i] = sc.nextInt();
11        System.out.println("Enter target :");
12        int x = sc.nextInt();
13        boolean flag = false;
14        int i;
15        for(i=0; i<l; i++){
16            if (x == arr[i]){
17                flag = true;
18                break;
19            }
20        if (flag) System.out.println("Found at index "+i);
21        else System.out.println("Not found");
22    }
23 }
```

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

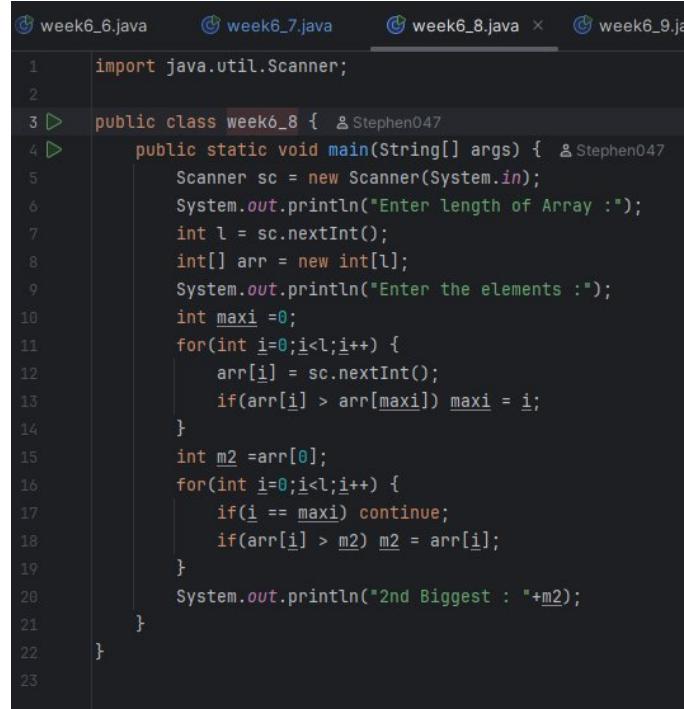
7. Write a Java program to print all prime numbers between 0 to 100.

```
week6_6.java week6_7.java x week6_8.java week6_9.java week6_10.java
1 public class week6_7 { Stephen047*
2     public static void main(String[] args) { Stephen047*
3         Outer : for (int i=0; i<=100; i++){
4             if (i == 0 || i == 1) continue;
5             for (int j=2; j<i; j++) if (i%j == 0) continue Outer;
6             System.out.print(i+" ");
7         }
8     }
9 }
```

```
"C:\Program Files\Java\jdk-17\bin\java.exe" "-javaagent:C:\Program Files\Java\VisualVM\lib\visualvm-agent.jar" -Djava.awt.headless=true week6_7
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
```

WEEK 6

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

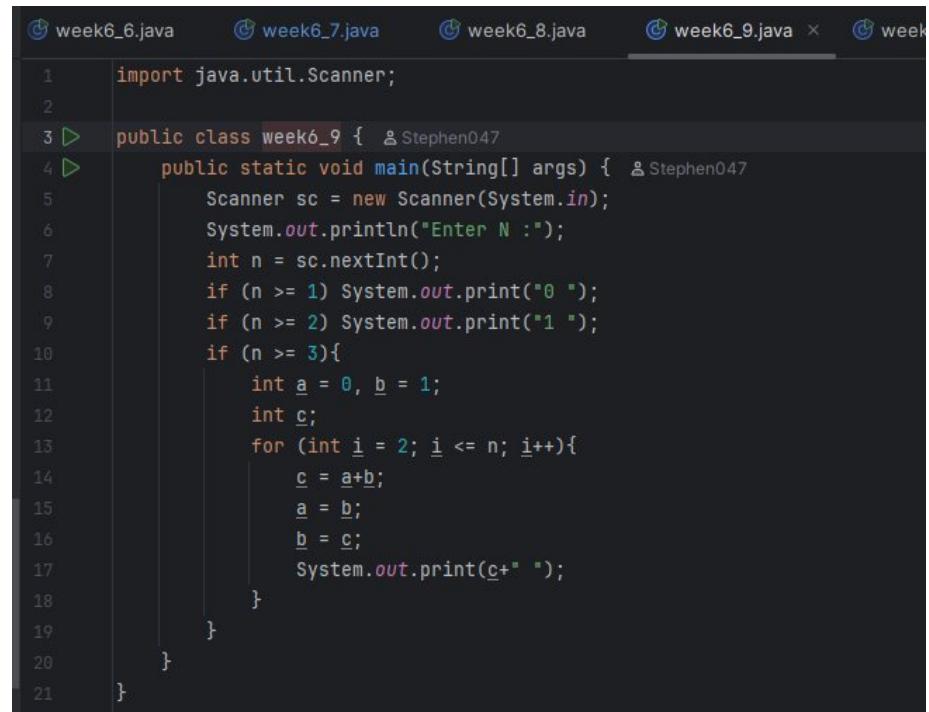


```
1 import java.util.Scanner;
2
3 public class week6_8 {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.println("Enter length of Array :");
7         int l = sc.nextInt();
8         int[] arr = new int[l];
9         System.out.println("Enter the elements :");
10        int maxi = 0;
11        for(int i=0;i<l;i++) {
12            arr[i] = sc.nextInt();
13            if(arr[i] > arr[maxi]) maxi = i;
14        }
15        int m2 = arr[0];
16        for(int i=0;i<l;i++) {
17            if(i == maxi) continue;
18            if(arr[i] > m2) m2 = arr[i];
19        }
20        System.out.println("2nd Biggest : "+m2);
21    }
22 }
```

"C:\Program Files\Java\jdk-17\bin\java.exe" "-jar"
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



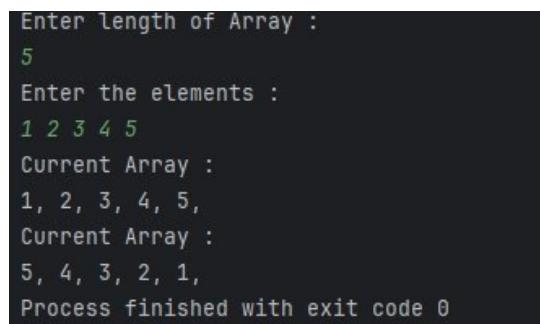
The screenshot shows a Java code editor with several tabs at the top: week6_6.java, week6_7.java, week6_8.java, week6_9.java (which is the active tab), and week. The code in week6_9.java is as follows:

```
1 import java.util.Scanner;
2
3 public class week6_9 {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.println("Enter N :");
7         int n = sc.nextInt();
8         if (n >= 1) System.out.print("0 ");
9         if (n >= 2) System.out.print("1 ");
10        if (n >= 3){
11            int a = 0, b = 1;
12            int c;
13            for (int i = 2; i <= n; i++){
14                c = a+b;
15                a = b;
16                b = c;
17                System.out.print(c+" ");
18            }
19        }
20    }
21 }
```

Below the code editor is a terminal window showing the execution of the program:

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

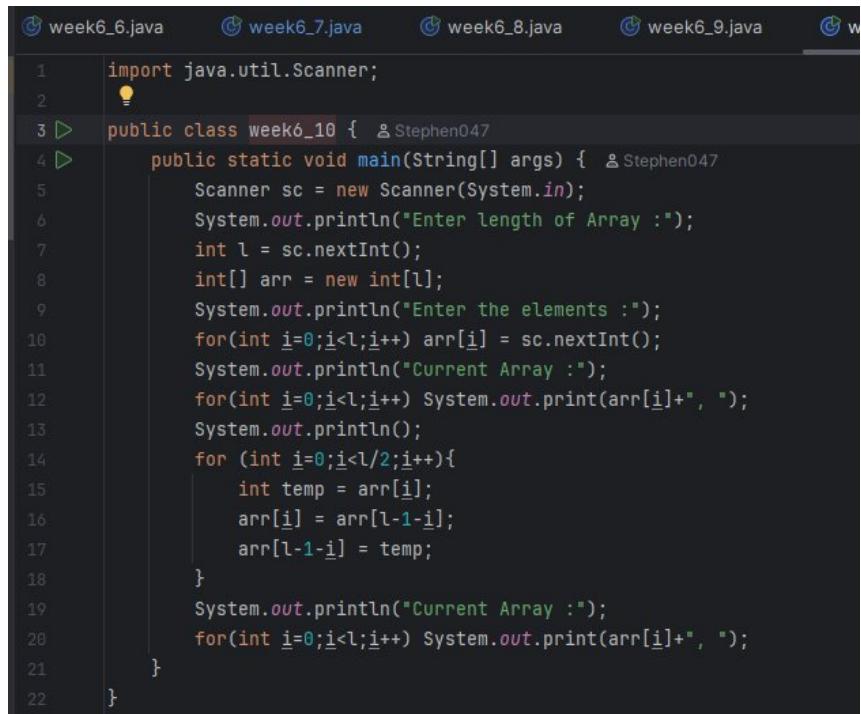
10. Write a Java program to reverse all elements of an array.



The screenshot shows a Java code editor with a terminal window below it displaying the output of a program that reverses the elements of an array.

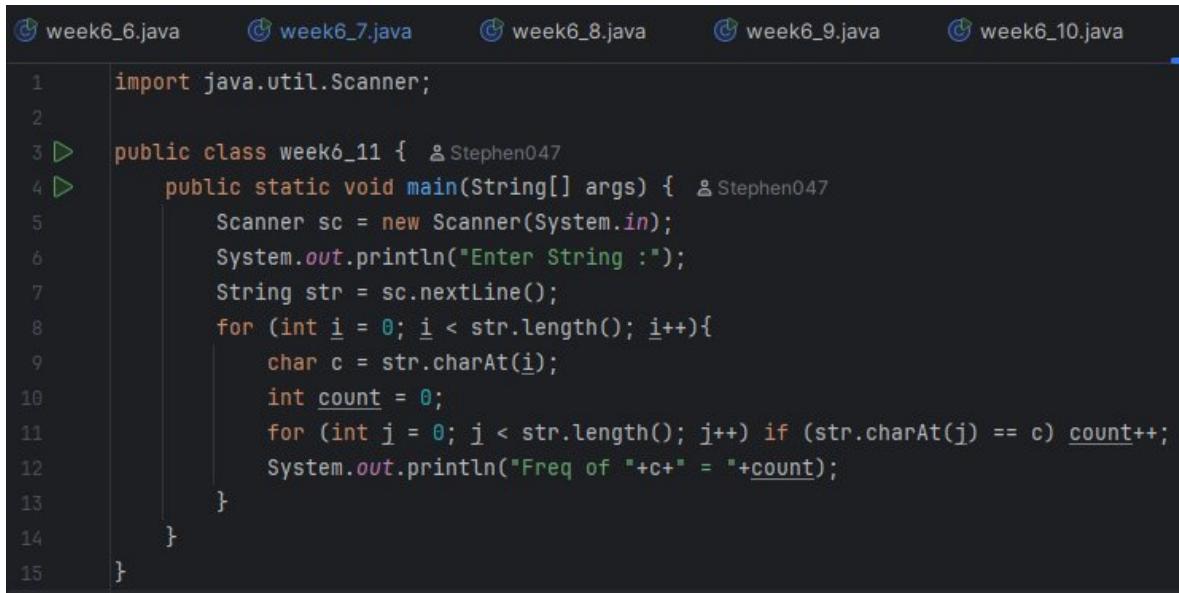
```
Enter length of Array :
5
Enter the elements :
1 2 3 4 5
Current Array :
1, 2, 3, 4, 5,
Current Array :
5, 4, 3, 2, 1,
Process finished with exit code 0
```

WEEK 6



```
1 import java.util.Scanner;
2
3 public class week6_10 {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.println("Enter length of Array :");
7         int l = sc.nextInt();
8         int[] arr = new int[l];
9         System.out.println("Enter the elements :");
10        for(int i=0;i<l;i++) arr[i] = sc.nextInt();
11        System.out.println("Current Array :");
12        for(int i=0;i<l;i++) System.out.print(arr[i]+", ");
13        System.out.println();
14        for (int i=0;i<l/2;i++){
15            int temp = arr[i];
16            arr[i] = arr[l-1-i];
17            arr[l-1-i] = temp;
18        }
19        System.out.println("Current Array :");
20        for(int i=0;i<l;i++) System.out.print(arr[i]+", ");
21    }
22 }
```

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



```
1 import java.util.Scanner;
2
3 public class week6_11 {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.println("Enter String :");
7         String str = sc.nextLine();
8         for (int i = 0; i < str.length(); i++){
9             char c = str.charAt(i);
10            int count = 0;
11            for (int j = 0; j < str.length(); j++) if (str.charAt(j) == c) count++;
12            System.out.println("Freq of "+c+" = "+count);
13        }
14    }
15 }
```

```
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
```