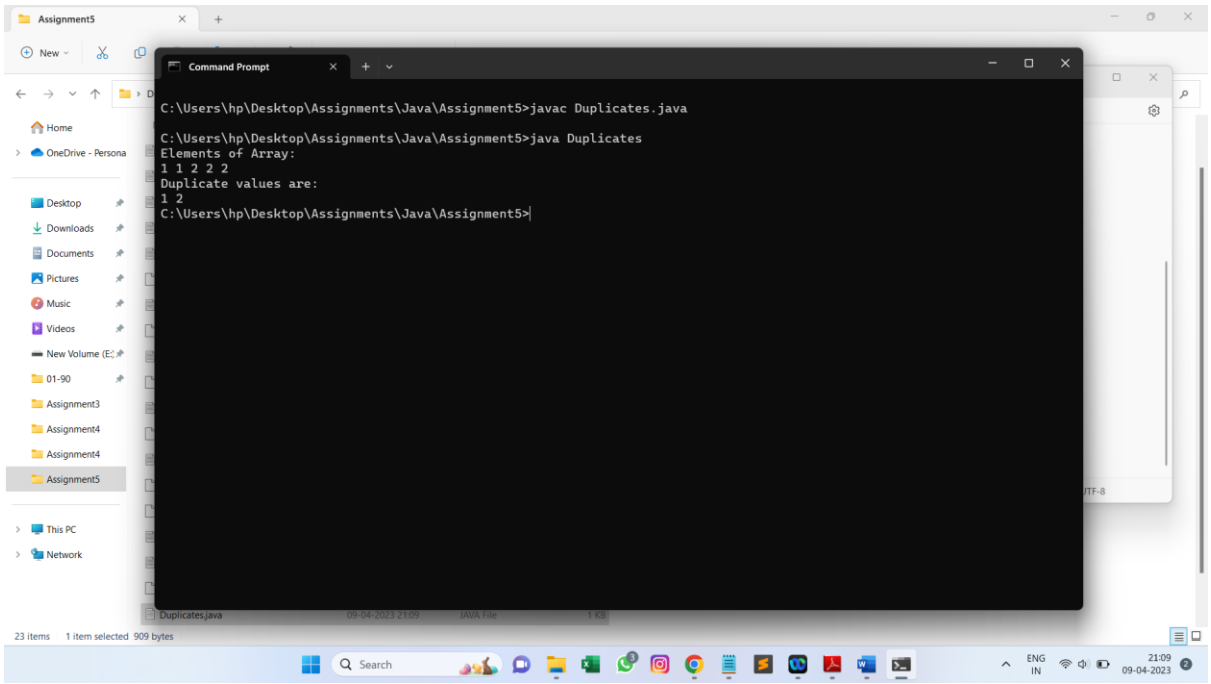
230350320047_Amruta Khandare_OOPS5

Q1:

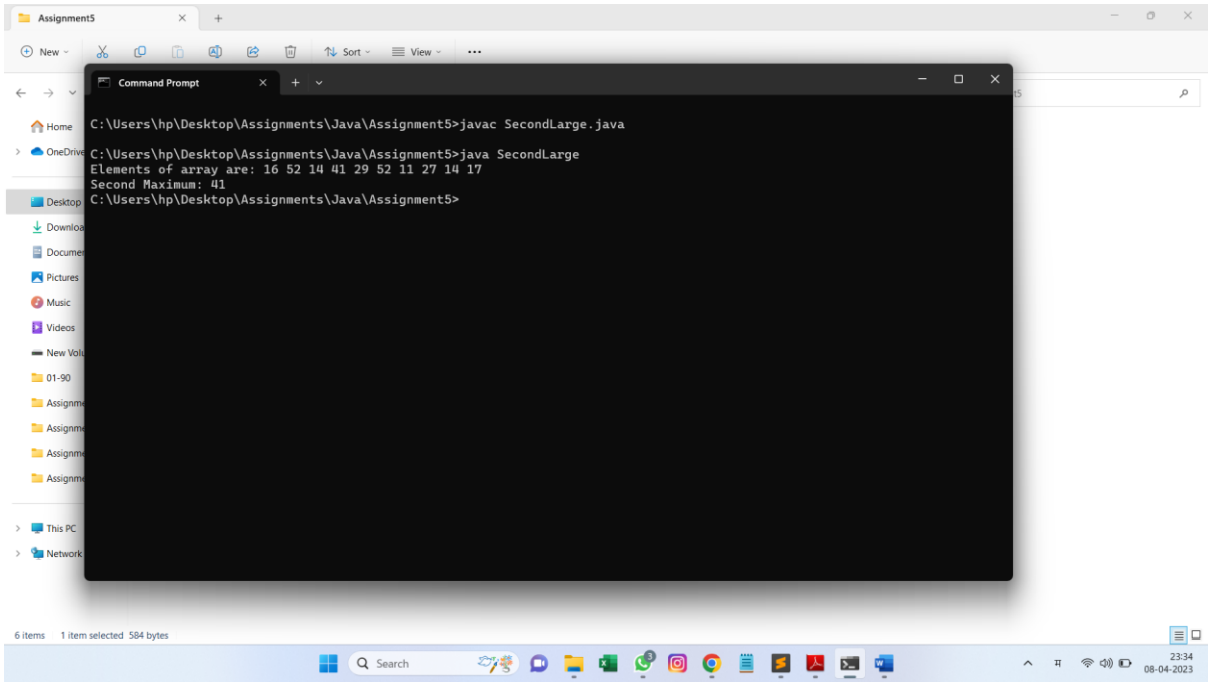
```
public static int removeduplicates(int a[], int n)
  {
     if (n == 0 || n == 1) {
        return n;
     }
     int[] temp = new int[n];
     int j = 0;

     for (int i = 0; i < n - 1; i++) {
        if (a[i] != a[i + 1]) {
           temp[j++] = a[i];
        }
     }

     temp[j++] = a[n - 1];
     for (int i = 0; i < j; i++) {
        a[i] = temp[i];
     }

     return j;
  }
  public static void main(String[] args)
  {
                System.out.println("Elements of Array: ");
```

```
        int a[] = { 1, 1, 2, 2, 2 };
                for(int i: a){
                System.out.print(a[i]+" ");
}
        int n = a.length;


        n = removeduplicates(a, n);



        System.out.println("\nDuplicate values are: ");
        for (int i = 0; i < n; i++)
            System.out.print(a[i] + " ");
    }
}
```



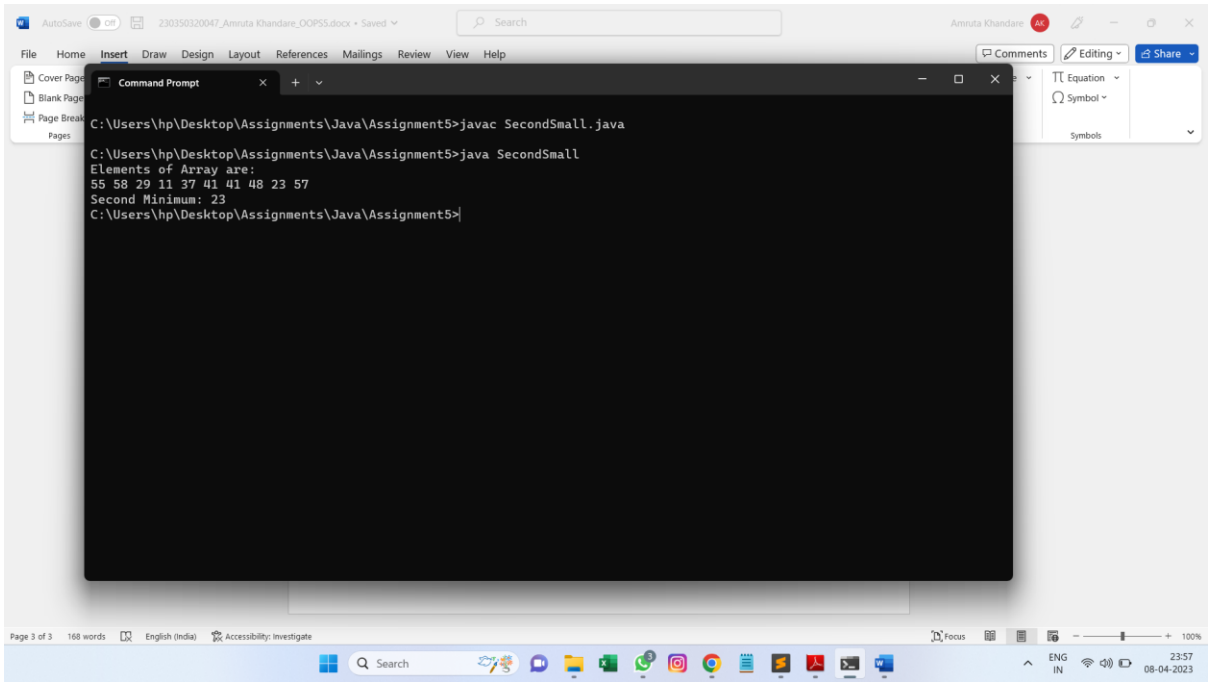
Q2:

```
import java.util.Scanner;
public class SecondLarge
{
	public static void main(String[] args){
		Scanner sc = new Scanner(System.in);
		int [] a = new int[10];
		int max1 = a[0], max2 = a[0];
		int i;
		System.out.print("Elements of array are: ");
		for(i = 0;i < 10;i++){
		   a[i] = 11 + (int)(Math.random()*50);
		   System.out.print(a[i]+" ");
		}
		for(i = 0;i < 10;i++){
		   if(a[i] > max1)
		   max1 = a[i];
		}
		   for(i = 0;i < 9;i++)
		   if(a[i] != max1 && a[i] > max2)
		   max2 = a[i];
		   System.out.print("\nSecond Maximum: "+max2);
	}
}
```


Assignment5
New
Sort
View
Command Prompt
C:\Users\hp\Desktop\Assignments\Java\Assignment5>javac SecondLarge.java
C:\Users\hp\Desktop\Assignments\Java\Assignment5>java SecondLarge
Elements of array are: 16 52 14 41 29 52 11 27 14 17
Second Maximum: 41
C:\Users\hp\Desktop\Assignments\Java\Assignment5>
Home
OneDrive
Desktop
Pictures
Music
Videos
01-90
This PC
Network
6 items
1 item selected 584 bytes
Search
23:34
08-04-2023

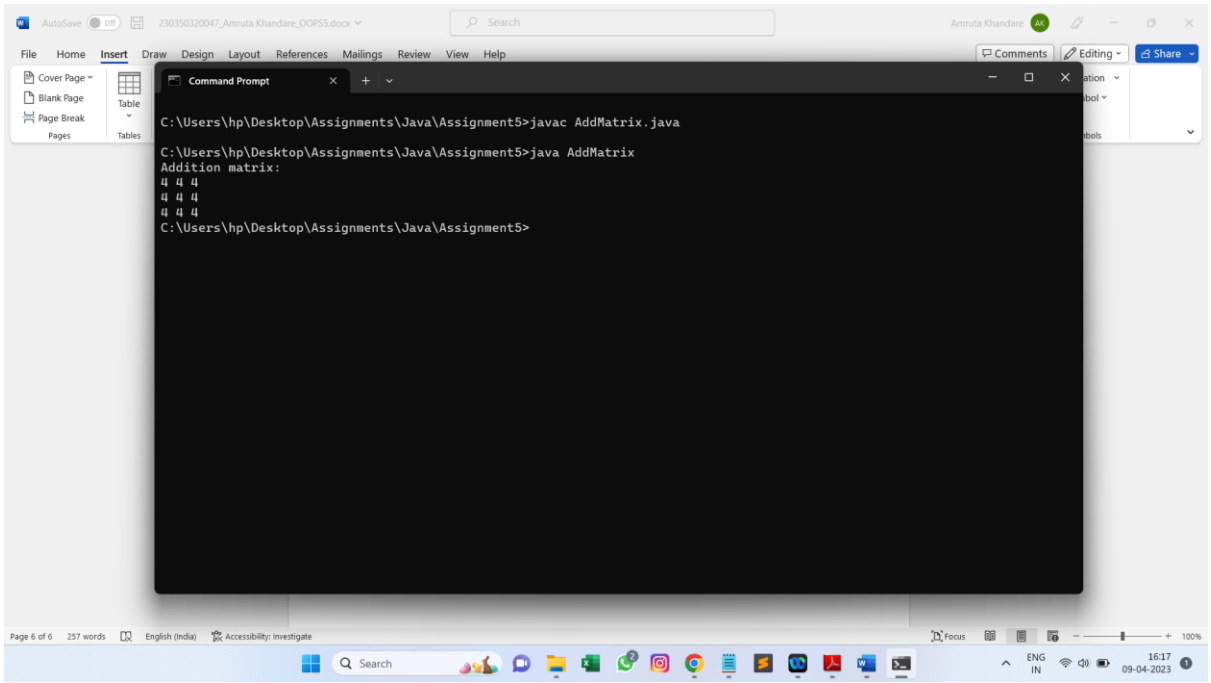
Q3:

```
import java.util.Scanner;
public class SecondSmall
{
	public static void main(String[] args){
	Scanner sc = new Scanner(System.in);
	int[] a = new int [10];
	int i;
	System.out.println("Elements of Array are: ");
	for(i = 0;i < 10;i++)
		a[i] = 11 + (int)(Math.random()*50);
	for(int j: a)
		System.out.print(j+" ");
		int min1 = a[0];
		int min2 = a[0];
	for(i = 0;i < 10;i++){
		  if(a[i] < min1)
		  min1 = a[i];
		}
	for(i = 0;i < 9;i++)
		  if(a[i] != min1 && min2 > a[i])
		  min2 = a[i];
		  System.out.print("\nSecond Minimum: "+min2);
	}
}
```


Command Prompt
C:\Users\hp\Desktop\Assignments\Java\Assignment5>javac SecondSmall.java
C:\Users\hp\Desktop\Assignments\Java\Assignment5>java SecondSmall
Elements of Array are:
55 58 29 11 37 41 41 48 23 57
Second Minimum: 23
C:\Users\hp\Desktop\Assignments\Java\Assignment5>

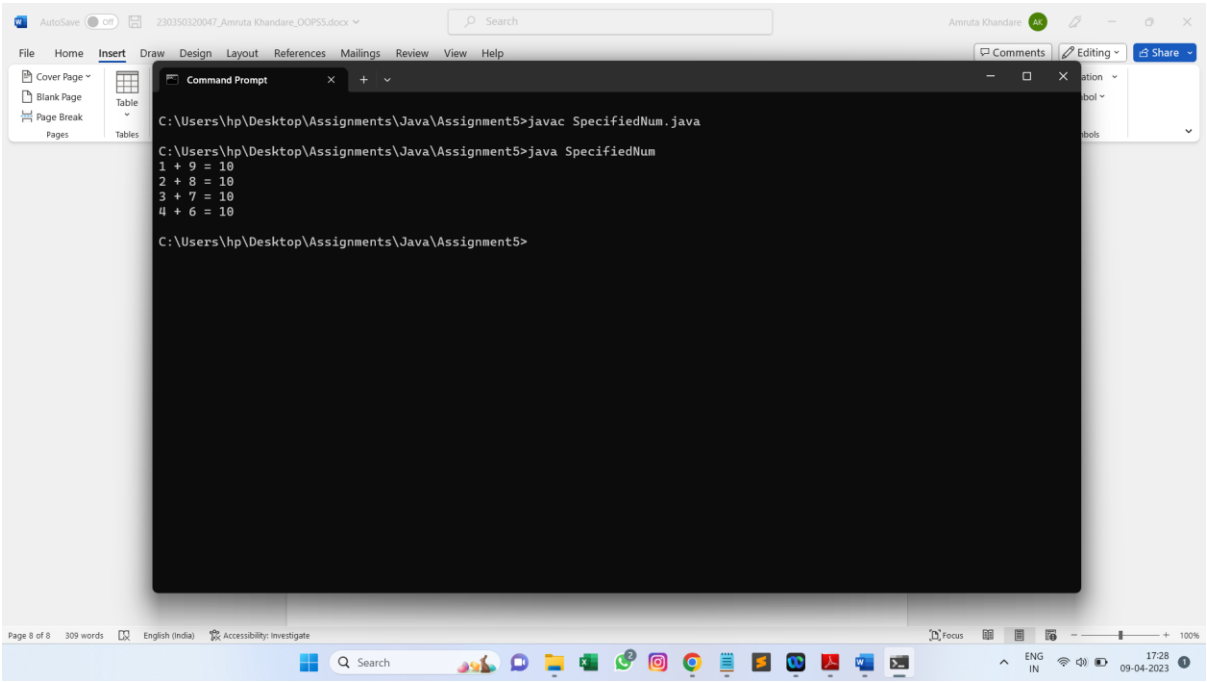
Q4:

```
public class AddMatrix
{
        public static void main(String[] args) {
           int a[][] = {{1, 2, 3}, {1, 2, 3}, {1, 2, 3}};
           int b[][] = {{3, 2, 1}, {3, 2, 1}, {3, 2, 1}};
           int [][] c = new int[3][3];
           int i, j, count = 0;
           System.out.print("Addition matrix:\n");
           for(i = 0;i < a.length;i++){
              for(j = 0;j < a.length;j++){
                 for(i = 0;i < b.length;i++){
              for(j = 0;j < b.length;j++){
                 c[i][j] = a[i][j] + b[i][j];
                 count++;
                 if(count == 4 || count == 7)
                 System.out.println();
                 System.out.print(c[i][j]+" ");
                 }}
        }
}}}
```


Command Prompt
C:\Users\hp\Desktop\Assignments\Java\Assignment5>javac AddMatrix.java
C:\Users\hp\Desktop\Assignments\Java\Assignment5>java AddMatrix
Addition matrix:
4 4 4
4 4 4
4 4 4
C:\Users\hp\Desktop\Assignments\Java\Assignment5>

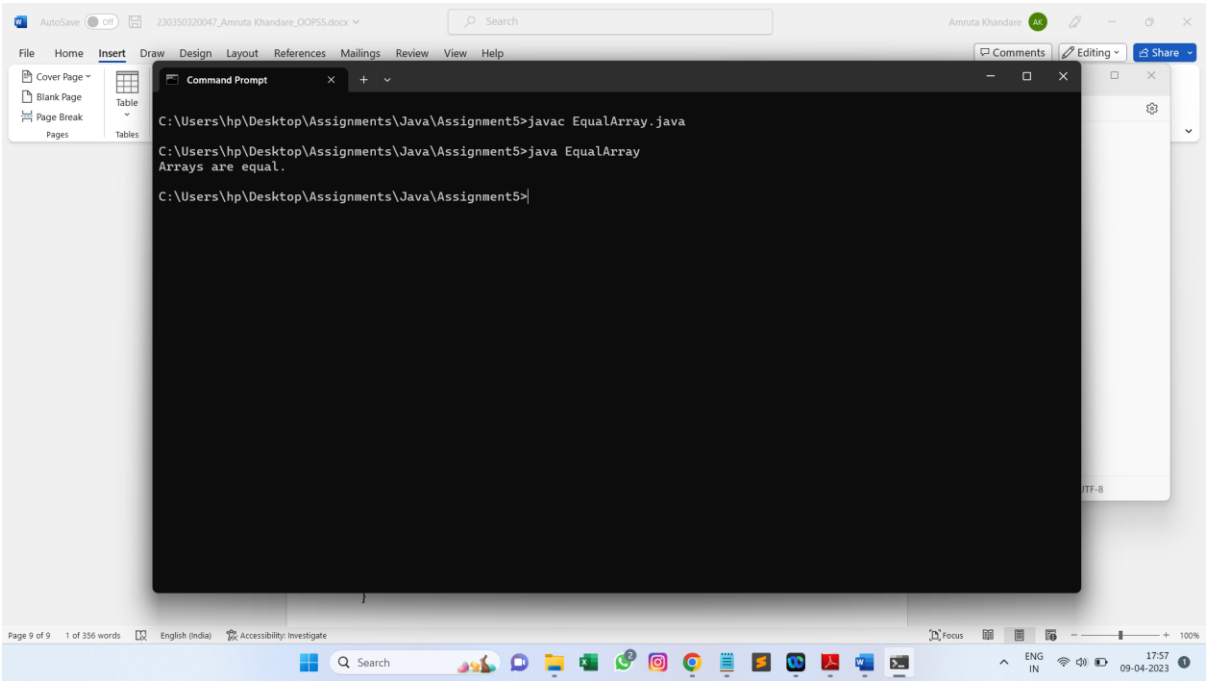
Q5:

```
public class SpecifiedNum
{
        public static void main(String[] args) {
           int number = 10;
           int [] a = new int[10];
           for(int i = 0;i < a.length;i++){
              a[i] = i;
           for(int j = i+1;j < a.length;j++){
              a[j] = j;
           if(a[i] + a[j] == number)
           System.out.println(a[i]+" + "+a[j]+" = "+ number);
           }}
        }}
```



Q6:

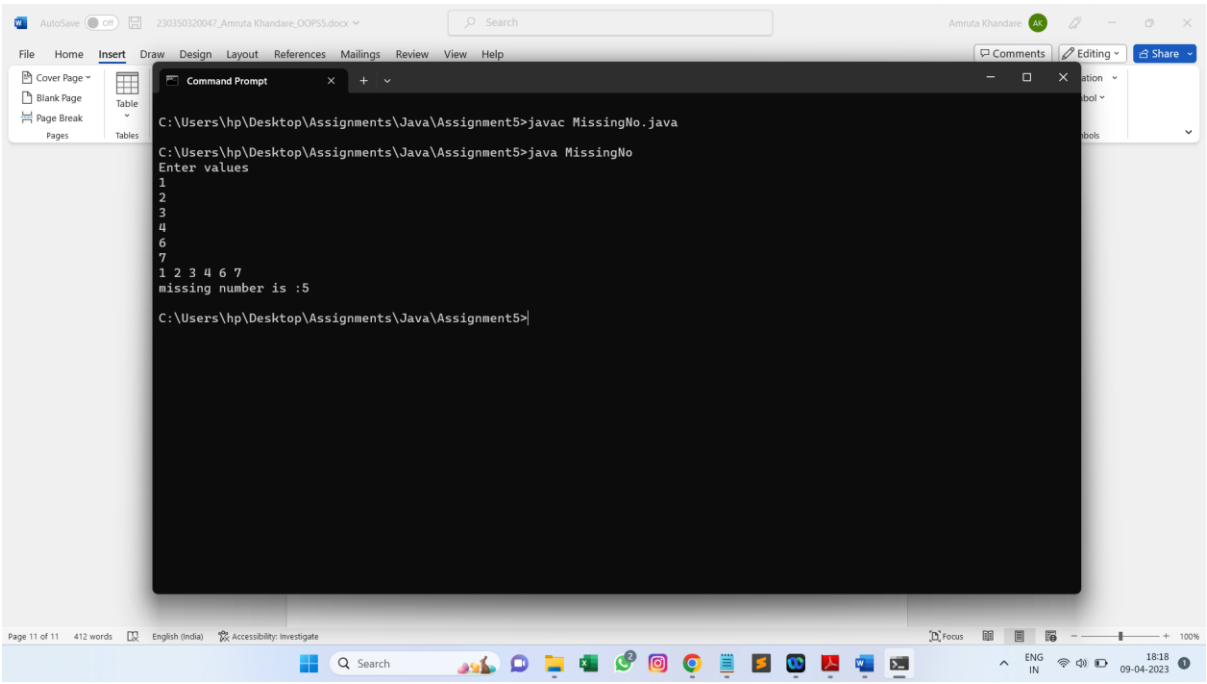
```
import java.util.Arrays;
public class EqualArray
{
public static void main (String[] args)
{
int[] a1 = new int[] {1, 2, 3, 4, 5};
int[] a2 = new int[] {1, 2, 3, 4, 5};
if (Arrays.equals(a1, a2))
System.out.println("Arrays are equal.");
else
System.out.println("Arrays are not equal.");
}
}
```



Q7:

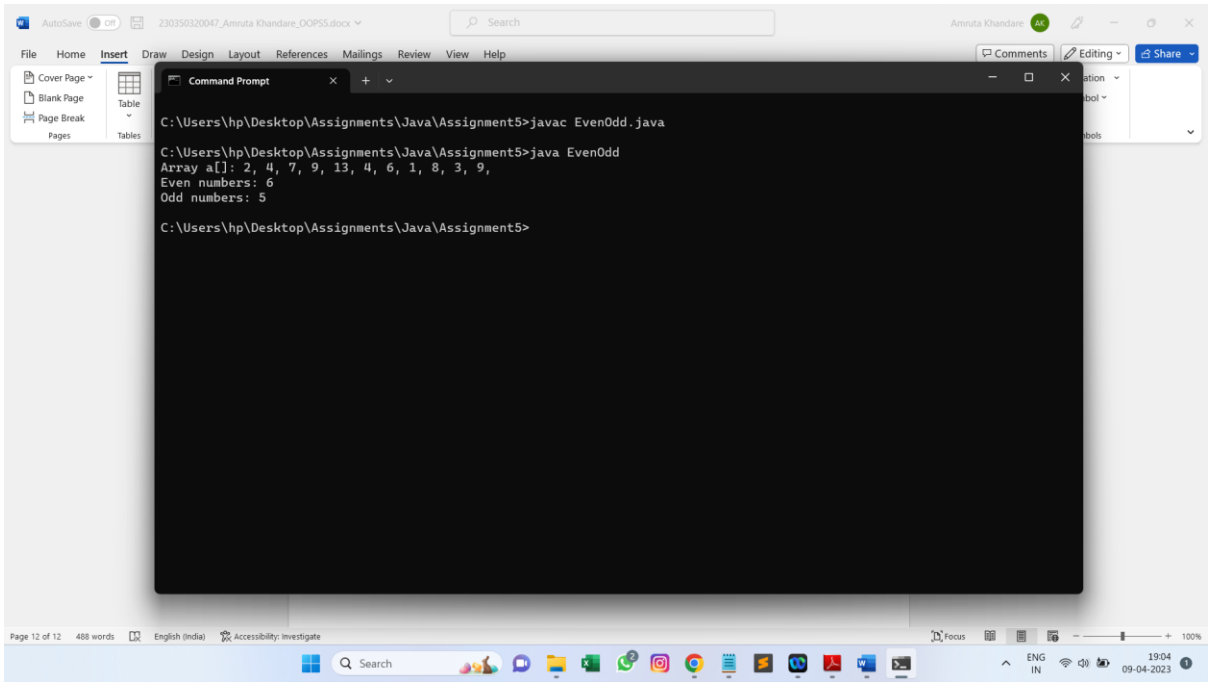
```
class MissingNo
{
    public static void main(String[] args) {
        java.util.Scanner sc=new java.util.Scanner(System.in);
        int arr[]=new int[6];
        System.out.println("Enter values ");
        for(int i=0;i<arr.length;i++)
            arr[i]=sc.nextInt();

       for(int i=0;i<arr.length;i++)
            for(int j=i+1;j<arr.length;j++)
                if(arr[i]>arr[j])
                {
                    int temp=arr[i];
                    arr[i]=arr[j];
                    arr[j]=temp;
                }//java.util.Arrays.sort(arr);

        for(int i=0;i<arr.length;i++)
        System.err.print(arr[i]+" ");

        int c=arr[0];
        for(int i=0;i<arr.length;i++)
        {
            if(arr[i]==c)
```

```
            c++;
            else
            {
               System.out.println("\nmissing number is :"+c);
               c=arr[i];
               c++;
            }
         }
      }
}
```



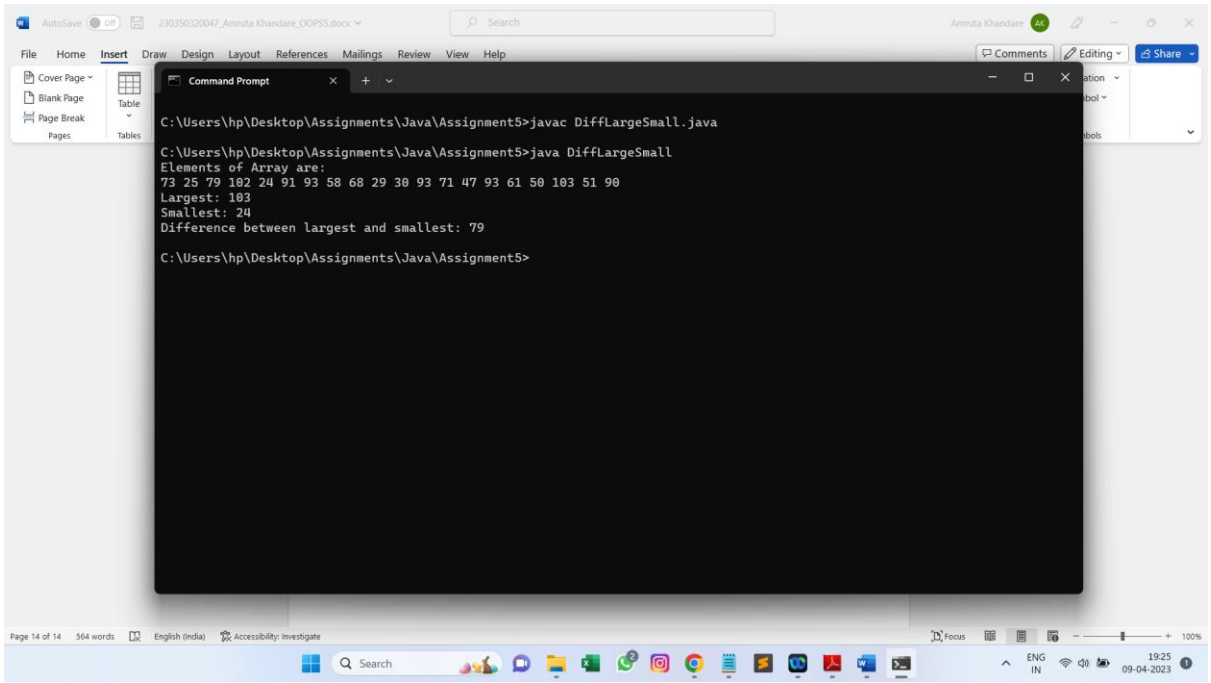
Q8:

```
public class EvenOdd
{
	public static void main(String[] args) {
	   int i, count1 = 0, count2 = 0;
	   int []a = {2, 4, 7, 9, 13, 4, 6, 1, 8, 3, 9};
	   System.out.print("Array a[]: ");
	   for(i = 0;i < a.length;i++){
	      System.out.print(a[i]+", ");
	   }
	   for(i = 0;i < a.length;i++){
	   if(i % 2 == 0)
	   count1++;
	}
		System.out.println("\nEven numbers: "+count1);
	   for(i = 0;i < a.length;i++){
	   if(i % 2 == 1)
	   count2++;
		}
		System.out.println("Odd numbers: "+count2);
	}
}
```


Command Prompt
C:\Users\hp\Desktop\Assignments\Java\Assignment5>javac EvenOdd.java
C:\Users\hp\Desktop\Assignments\Java\Assignment5>java EvenOdd
Array a[]: 2, 4, 7, 9, 13, 4, 6, 1, 8, 3, 9,
Even numbers: 6
Odd numbers: 5
C:\Users\hp\Desktop\Assignments\Java\Assignment5>

Q9:

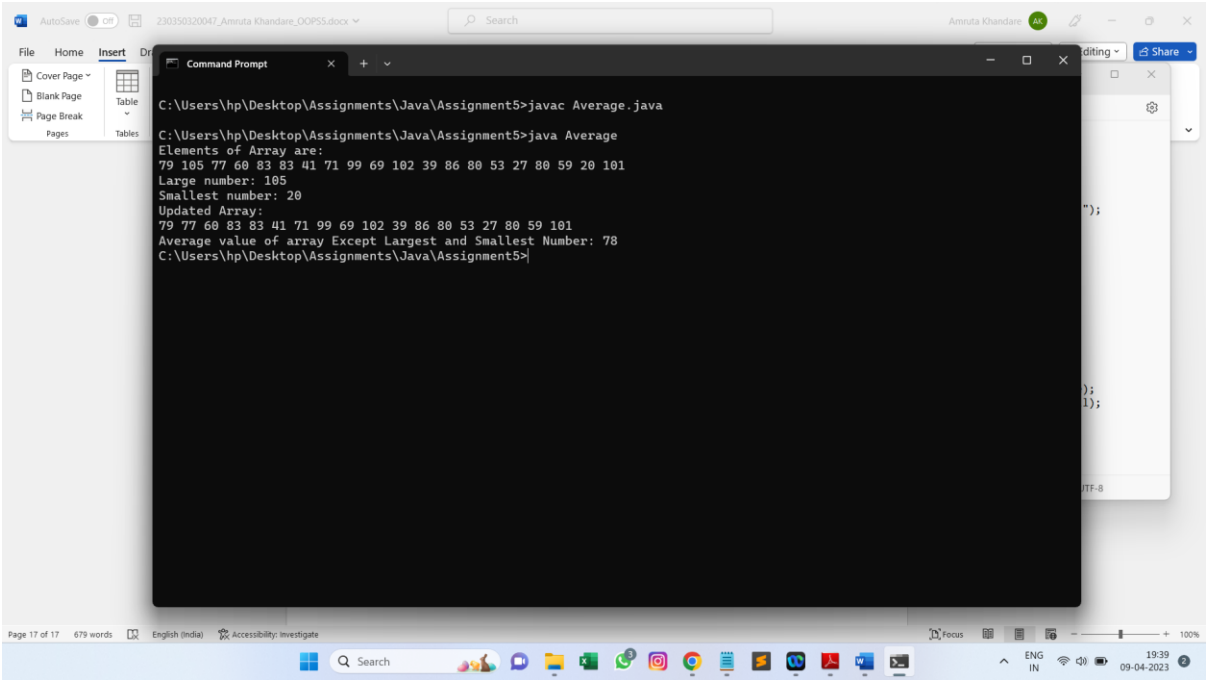
```
public class DiffLargeSmall
{
	public static void main(String[] args){
		int[] a = new int [20];
		System.out.println("Elements of Array are: ");
		for(int i = 0;i < 20;i++)
		a[i] = 11 + (int)(Math.random()*99);
		for(int i: a)
		System.out.print(i+" ");
		int large = a[0];
		int small = a[0];
		for(int i = 0;i < 20;i++){
		   if(a[i] > large)
		   large = a[i];
		   if(a[i] < small)
		   small = a[i];
		}
		System.out.println("\nLargest: "+large);
		System.out.println("Smallest: "+small);
		System.out.println("Difference between largest and smallest:
"+(large-small));
}
}
```


Command Prompt
C:\Users\hp\Desktop\Assignments\Java\Assignment5>javac DiffLargeSmall.java
C:\Users\hp\Desktop\Assignments\Java\Assignment5>java DiffLargeSmall
Elements of Array are:
73 25 79 102 24 91 93 58 68 29 30 93 71 47 93 61 50 103 51 90
Largest: 103
Smallest: 24
Difference between largest and smallest: 79
C:\Users\hp\Desktop\Assignments\Java\Assignment5>

Q10:

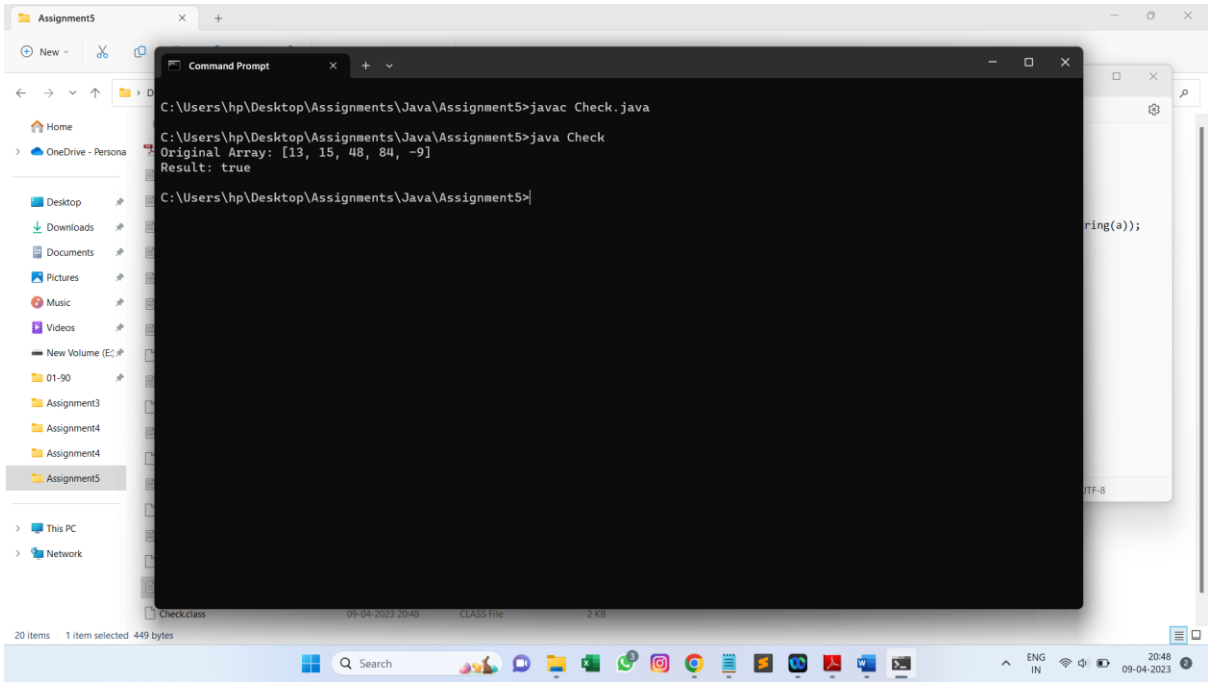
```
public class Average
{
        public static void main(String[] args){
           int sum = 0, average = 0;
                int[] a = new int [20];
                System.out.println("Elements of Array are: ");
                for(int i = 0;i < 20;i++)
                a[i] = 11 + (int)(Math.random()*99);
                for(int i: a)
                System.out.print(i+" ");
                int large = a[0];
                int small = a[0];
                for(int i = 0;i < 20;i++){
                   if(a[i] > large)
                   large = a[i];
                   if(a[i] < small)
                   small = a[i];
                }
                System.out.println("\nLarge number: "+large);
                System.out.println("Smallest number: "+small);
                System.out.println("Updated Array: ");
                for(int i = 0;i < 20;i++)
                if(a[i] != large && a[i] != small)
                System.out.print(a[i]+" ");
                for(int i: a)
```

```
            sum = sum + i;
System.out.print("\nAverage value of array Except Largest and Smallest
Number: "+sum/(a.length-2));
        }
}
```



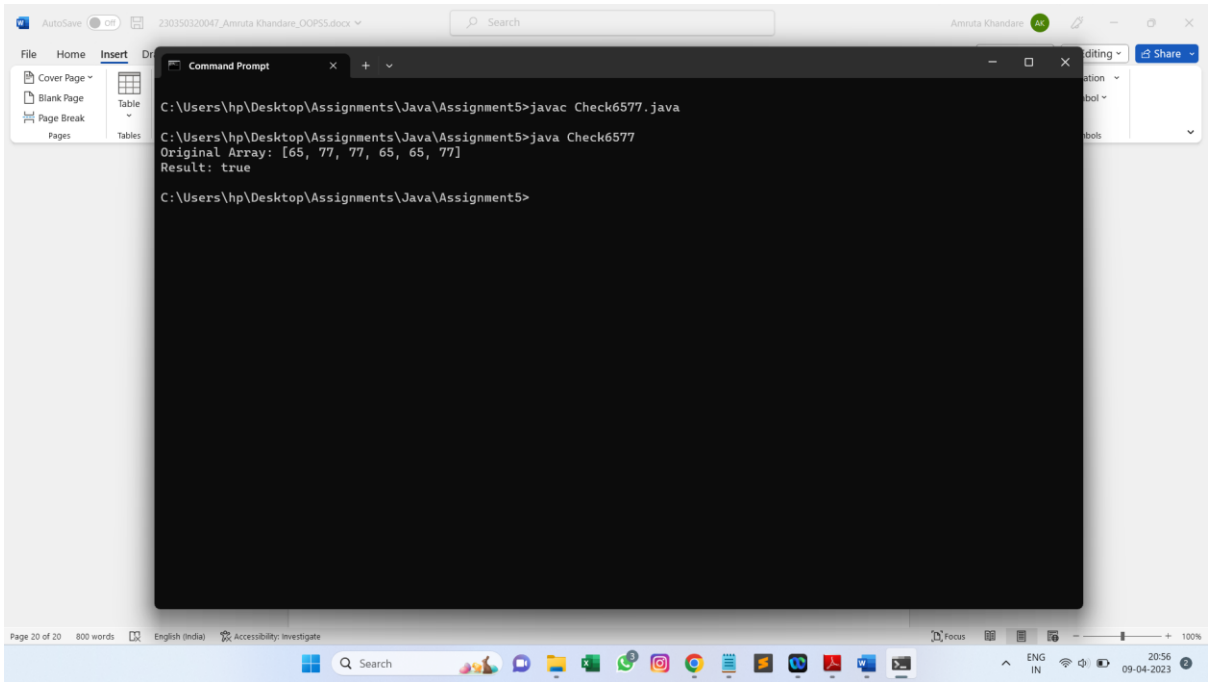
Q11:

```
import java.util.*;
import java.io.*;
 public class Check {
 public static void main(String[] args)
 {
   int[] a = {13, 15, 48, 84, -9};
         System.out.println("Original Array: "+Arrays.toString(a));
         System.out.println("Result: "+test(a));
   }
   public static boolean test(int[] numbers) {
   for (int number : numbers) {
     if (number == 0 || number == -1) {
       return false;
     }
   }
   return true;
  }
}
```


Assignment5
Command Prompt
C:\Users\hp\Desktop\Assignments\Java\Assignment5>javac Check.java
C:\Users\hp\Desktop\Assignments\Java\Assignment5>java Check
Original Array: [13, 15, 48, 84, -9]
Result: true
C:\Users\hp\Desktop\Assignments\Java\Assignment5>
Home
OneDrive - Persona
Desktop
Downloads
Documents
Pictures
Music
Videos
New Volume (E:)
01-90
Assignment3
Assignment4
Assignment4
Assignment5
This PC
Network
Check.class
09-04-2023 20:48
CLASS File
2 KB
20 items
1 item selected 449 bytes
Search
ENG
IN
20:48
09-04-2023

Q12:

```
import java.util.*;
import java.io.*;
 public class Check6577 {
 public static void main(String[] args)
 {
   int[] a = {65, 77, 77, 65, 65, 77};
         System.out.println("Original Array: "+Arrays.toString(a));
         System.out.println("Result: "+test(a));
   }
   public static boolean test(int[] numbers) {
   for (int number : numbers) {
         boolean r = number != 65 && number != 77;
     if (r) {
       return false;
     }
   }
   return true;
  }
}
```


Command Prompt
C:\Users\hp\Desktop\Assignments\Java\Assignment5>javac Check6577.java
C:\Users\hp\Desktop\Assignments\Java\Assignment5>java Check6577
Original Array: [65, 77, 77, 65, 65, 77]
Result: true
C:\Users\hp\Desktop\Assignments\Java\Assignment5>