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Vellore Institute of Technology

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Programme	:	**BTech. CSE Core**	Semester	:	**Win 2021-22**
Course	:	**Java Programming**	Code	:	**CSE1007**
Faculty	:	**Dr. Pradeep K**	Slot	:	**L9+L10**
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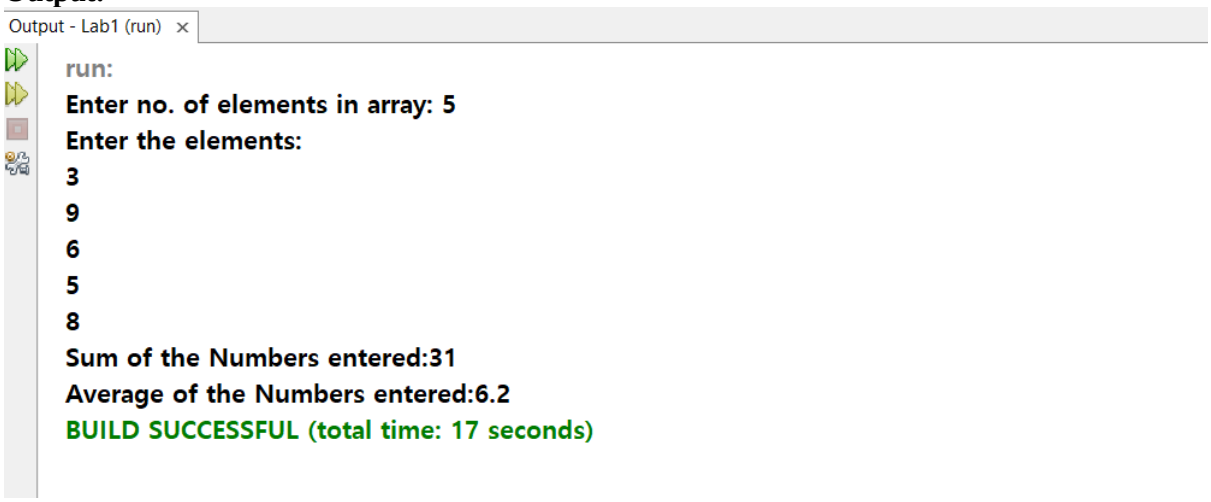
1. Write a program to calculate average of the numbers entered.

```java
package lab1;

import java.util.Scanner;

public class Lab1_Average
{
    public static void main(String[] args)
    {
        int n, sum = 0;
        float average;
        Scanner s = new Scanner(System.in);
        System.out.print("Enter no. of elements in array:");
        n = s.nextInt();
        int a[] = new int[n];
        System.out.println("Enter the elements:");
        for(int i = 0; i < n ; i++)
        {
            a[i] = s.nextInt();
            sum += a[i];
        }
        System.out.println("Sum of the Numbers entered:"+sum);
        average = (float)sum / n;
        System.out.println("Average of the Numbers entered:"+average);
    }
}
```

Output:



2. Calculate the average of the numbers except the Minimum and Maximum numbers.

```
package lab1;

import java.util.Scanner;

public class Lab1_Average_MaxMin
{
    public static void main(String[] args)
    {
        int n, sum=0;
        float average;
        Scanner s = new Scanner(System.in);
        System.out.print("Enter no. of elements in array: ");
        n = s.nextInt();
        int a[] = new int[n];
        System.out.println("Enter the elements: ");
        for(int i = 0; i < n ; i++){
            a[i] = s.nextInt();
            sum += a[i];
        }
        System.out.println("Sum of the Numbers (Before): "+sum);
        for(int i=0; i < n-1; i++){
            for(int j=i+1; j<n; j++){
                if(a[i]>a[j]){
                    int temp = a[i];
                    a[i] = a[j];
                    a[j] = temp;
                }
```

```
            }
        }

        sum -= (a[0] + a[n-1]);
        System.out.println("Sum of the Numbers (After): "+sum);
        average = (float)sum / (n-2);
        System.out.println("Average of the Numbers entered: "+average);
    }
}
```

Output:

```
Output - Lab1 (run)
run:
Enter no. of elements in array: 6
Enter the elements:
88
12
34
56
90
8
Sum of the Numbers (Before): 288
Sum of the Numbers (After): 190
Average of the Numbers entered: 47.5
BUILD SUCCESSFUL (total time: 24 seconds)
```

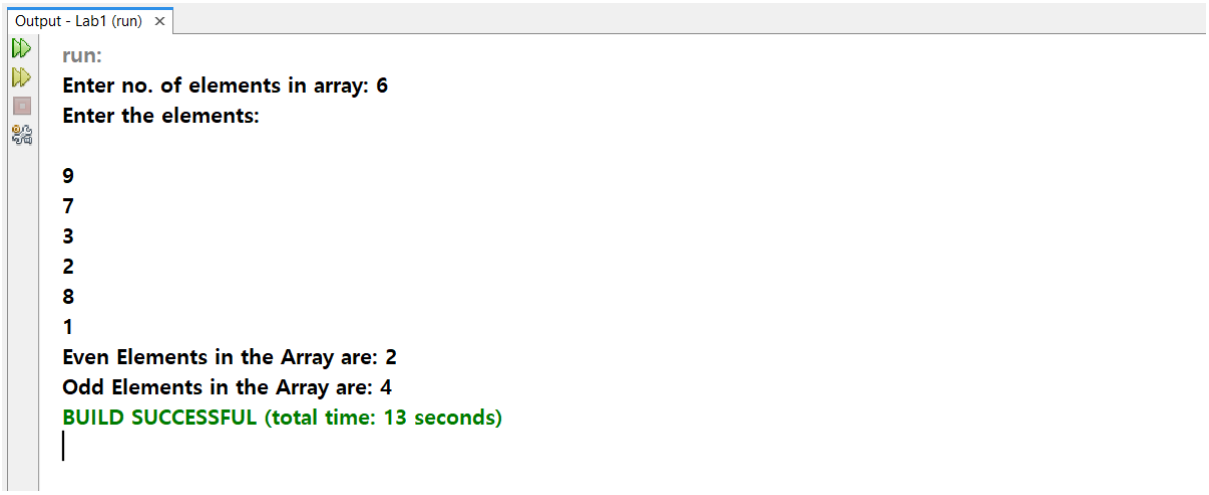
3. Calculate the number of Even and Odd Numbers in the array

```
package lab1;
import java.util.Scanner;

public class Lab1_Even_Odd
{
    public static void main(String[] args)
    {
        int n, even=0, odd=0;
        Scanner s = new Scanner(System.in);
        System.out.print("Enter no. of elements in array: ");
        n = s.nextInt();
        int a[] = new int[n];
        System.out.println("Enter the elements: \n");
        for(int i = 0; i < n ; i++){
            a[i] = s.nextInt();
            if(a[i]%2==0)
                even+=1;
```

```
            else
                odd+=1;
        }
        System.out.println("Even Elements in the Array are: "+even);
        System.out.println("Odd Elements in the Array are: "+odd);
    }
}
```

Output:



4. Write a Program to copy the elements of an array to a new array

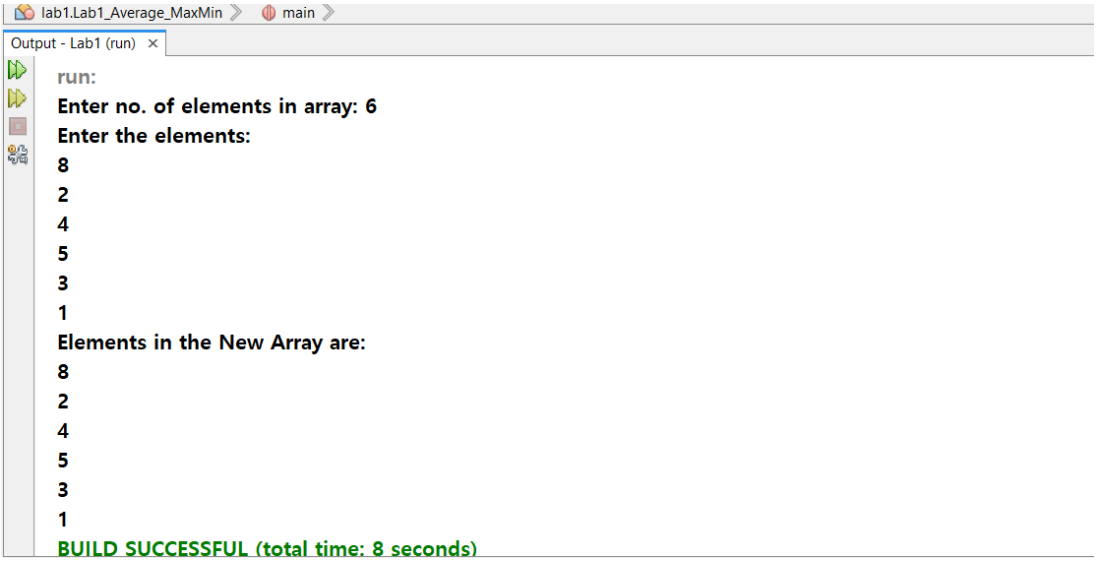
```
package lab1;

import java.util.Scanner;

public class Lab1_New
{
    public static void main(String[] args)
    {
        int n;
        Scanner s = new Scanner(System.in);
        System.out.print("Enter no. of elements in array: ");
        n = s.nextInt();
        int old[] = new int[n];
        int copy[] = new int[n];
        System.out.println("Enter the elements: \n");
        for(int i = 0; i < n ; i++)
            old[i] = s.nextInt();
        System.out.println("Elements in the New Array are: \n");
        for(int i = 0; i < n ; i++){
            copy[i] = old[i];
```

```
            System.out.println(copy[i]);
        }
    }
}
```

Output:



5. Write a program to change the rows with columns of a 2-dimensional array.

```
package lab1;
import java.util.Scanner;

public class Lab1_Change_Row{
    public static void main(String args[]){
        Scanner s = new Scanner(System.in);
        System.out.println("Enter the number of Rows: ");
        int row = s.nextInt();
        System.out.println("Enter the number of Columns: ");
        int col = s.nextInt();
        int original[][]=new int[row][col];
        int change[][]=new int[row][col];

        System.out.println("Enter the array elements: ");
        for(int i=0;i<row;i++)
            for(int j=0;j<col;j++)
                original[i][j] = s.nextInt();

        System.out.println("Printing Original Array: ");
        for(int i=0;i<row;i++){
```

```
            for(int j=0;j<col;j++){
                change[i][j]=original[j][i];
                System.out.print(original[i][j]+" ");
            }
            System.out.println();
        }

        System.out.println("Printing Matrix After Change:");
        for(int i=0;i<row;i++){
            for(int j=0;j<col;j++)
                System.out.print(change[i][j]+" ");
            System.out.println();
        }
    }
}
```

Output: