

ARRAYS

One Dimensional Arrays

Program 1:

```
package onedimension;

import java.util.Scanner;

public class HighestMarks {

    public static void main(String[] args) {

        Scanner scan=new Scanner(System.in);

        System.out.println("enter no of subjects");

        int sub=scan.nextInt();

        //creating an array

        int a[]=new int[sub];

        //storing marks in an array

        for(int i=0;i<a.length;i++)

        {

            System.out.println("enter marks of subject"+i);

            a[i]=scan.nextInt();

        }

        System.out.println();

        //printing marks

        for(int i=0;i<a.length;i++)

        {

            System.out.print(a[i]+" ");
```

```

    }

    System.out.println();

    //printing sum

    double sum=0;

    for(int i=0;i<a.length;i++)
    {

        sum=sum+a[i];

    }

    System.out.println("Sum="+sum);

    //printing percentage

    double per;

    per=(sum/(sub*100))*100;

    System.out.println("percentage="+per);

    //printing highest marks in subject

    int high=0;

    for(int i=0;i<a.length;i++)
    {

        if(a[i]>high)
        {

            high=a[i];

        }

    }

    System.out.println("highestmarks="+high);

}

```

```
}
```

Output:

A screenshot of a Java IDE's terminal window. The window title is "Terminal 1" and it shows the command prompt for a Java application. The output of the program is displayed in a monospaced font. The user enters the number of subjects (4) and then marks for four subjects (65, 78, 95, 85). The program calculates the sum (323.0), percentage (80.75), and highest marks (95).

```
<terminated> HighestMarks [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (14-Aug-2023, 12:12:59 am - 12:13:13 am) [pid: 10472]
enter no of subjects
4
enter marks of subject0
65
enter marks of subject1
78
enter marks of subject2
95
enter marks of subject3
85

65 78 95 85
Sum=323.0
percentage=80.75
highestmarks=95
```

Program 2:

```
package onedimension;

import java.util.Scanner;

public class Merge {

    public static void main(String[] args) {

        Scanner scan=new Scanner(System.in);

        System.out.println("enter the size of an array");

        int n1=scan.nextInt();

        System.out.println("enter the size of an array");

        int n2=scan.nextInt();

        int a[]=new int[n1];

        int b[]=new int[n2];

        int c[]=new int [n1+n2];

        for(int i=0;i<a.length;i++)
```

```
{
    System.out.println("enter elements");
    a[i]=scan.nextInt();
}
for(int i=0;i<a.length;i++)
{
    System.out.println(a[i]);

}
for(int i=0;i<b.length;i++)
{
    System.out.println("enter elements");
    b[i]=scan.nextInt();
}
for(int i=0;i<b.length;i++)
{
    System.out.println(b[i]);

}
for(int i=0;i<a.length;i++)
{
    c[i]=a[i];

}
int ind=n1;
for(int i=0;i<b.length;i++)
{
```

```

        c[ind]=b[i];

        //System.out.print(c[n1]);

        ind++;

    }

    for(int i=0;i<c.length;i++)
    {

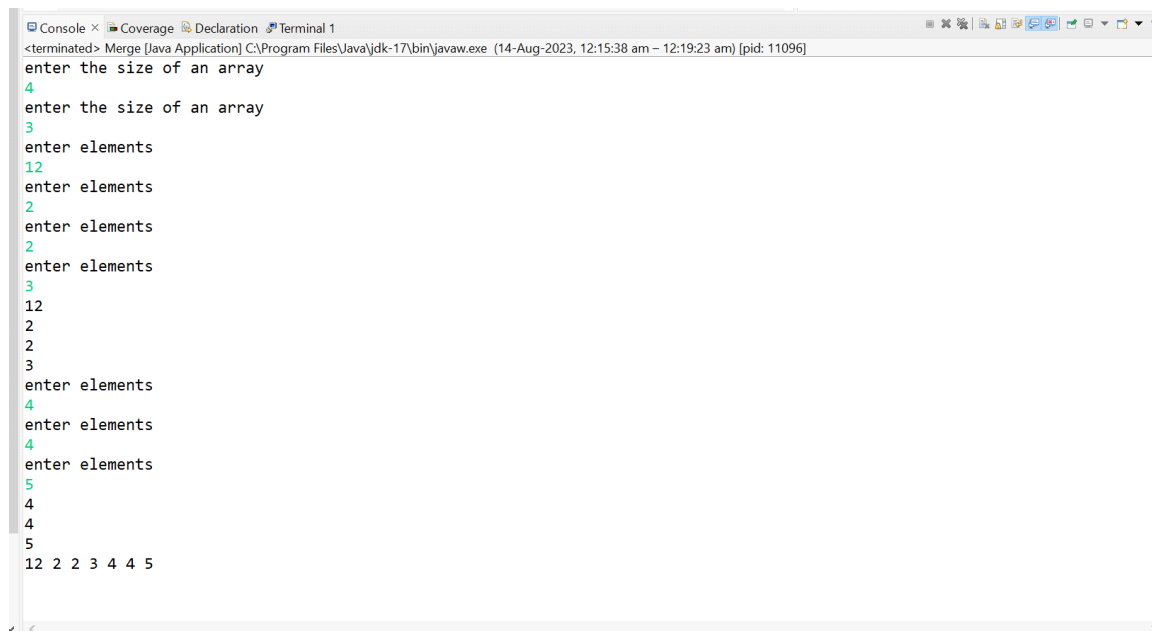
        System.out.print(c[i]+" ");

    }

}

```

Output:



```

Console x Coverage Declaration Terminal 1
<terminated> Merge [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (14-Aug-2023, 12:15:38 am - 12:19:23 am) [pid: 11096]
enter the size of an array
4
enter the size of an array
3
enter elements
12
enter elements
2
enter elements
2
enter elements
3
12
2
2
3
enter elements
4
enter elements
4
enter elements
5
4
4
5
12 2 2 3 4 4 5

```

Program 3:

```

package onedimension;

import java.util.Scanner;

```

```
public class MergeEvenNumbers {  
    public static void main(String[] args) {  
        Scanner scan=new Scanner(System.in);  
        System.out.println("enter the size of an array1");  
        int n1=scan.nextInt();  
        System.out.println("enter the size of an array2");  
        int n2=scan.nextInt();  
        int count=0;  
  
        int a[]=new int[n1];  
        int b[]=new int[n2];  
  
        for(int i=0;i<a.length;i++)  
        {  
            System.out.println("enter elements");  
            a[i]=scan.nextInt();  
        }  
        for(int i=0;i<a.length;i++)  
        {  
            System.out.print(a[i]+" ");  
            if(a[i]%2==0)  
            {  
                count++;  
            }  
        }  
  
        System.out.println();  
    }  
}
```

```

for(int i=0;i<b.length;i++)
{
    System.out.println("enter elements");
    b[i]=scan.nextInt();
}
for(int i=0;i<b.length;i++)
{
    System.out.print(b[i]+" ");
    if(b[i]%2==0)
    {
        count++;
    }
}
System.out.println();
System.out.println("count of even numbers"+count);
//concatenation

int c[]=new int[count];
int ind=0;
for(int i=0;i<a.length;i++)
{
    if(a[i]%2==0)
    {
        c[ind]=a[i];
        ind++;
    }
}

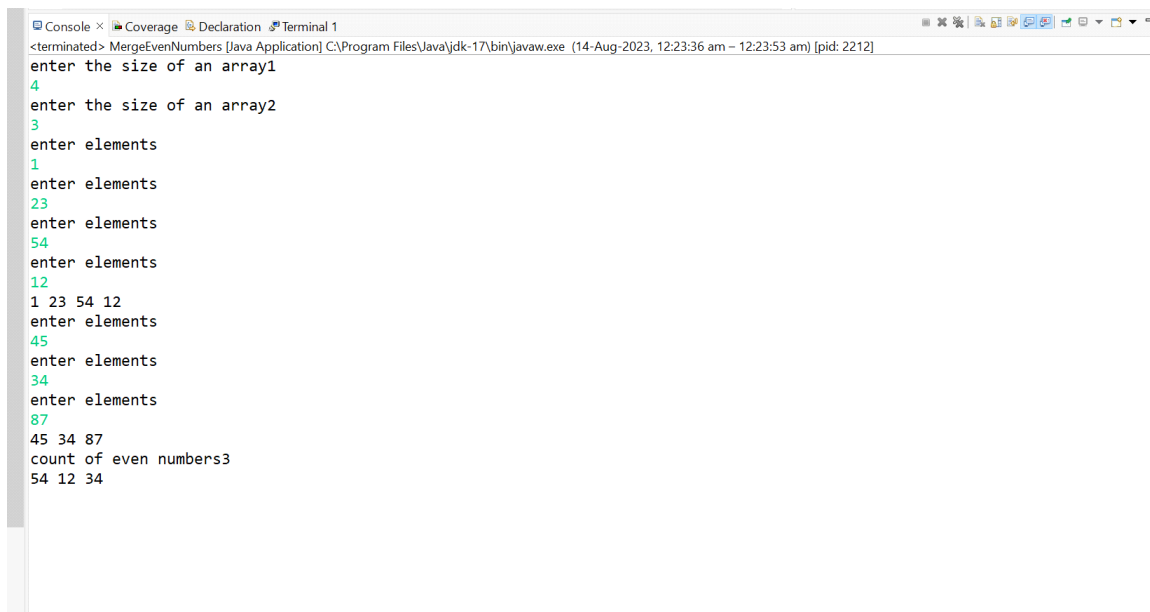
```

```

    for(int i=0;i<b.length;i++)
    {
        if(b[i]%2==0)
        {
            c[ind]=b[i];
            ind++;
        }
    }
    for(int i=0;i<c.length;i++)
    {
        System.out.print(c[i]+" ");
    }
}

```

Output:



```

Console x Coverage Declaration Terminal 1
<terminated> MergeEvenNumbers [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (14-Aug-2023, 12:23:36 am - 12:23:53 am) [pid: 2212]
enter the size of an array1
4
enter the size of an array2
3
enter elements
1
enter elements
23
enter elements
54
enter elements
12
1 23 54 12
enter elements
45
enter elements
34
enter elements
87
45 34 87
count of even numbers3
54 12 34

```


Program 4:

```
package onedimension;

import java.util.Scanner;

public class Replace {

    public static void main(String[] args) {

        Scanner scan=new Scanner(System.in);

        System.out.println("enter the size of an array");

        int n=scan.nextInt();

        int a[]=new int[n];

        for(int i=0;i<a.length;i++)
        {

            System.out.println("enter elements");

            a[i]=scan.nextInt();

        }

        for(int i=0;i<a.length;i++)
        {

            if(a[i]%2==0)
            {

                a[i]=0;

                System.out.print(a[i]+" ");

            }

            else
            {

                a[i]=1;

                System.out.print(a[i]+" ");

            }

        }

    }

}
```

```

    }

}

}

```

Output:



```

Console x Coverage Declaration Terminal 1
<terminated> Replace [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (14-Aug-2023, 12:28:05 am - 12:28:15 am) [pid: 9540]
enter the size of an array
4
enter elements
1
enter elements
2
enter elements
3
enter elements
4
1 0 1 0

```

Program 5:

```

package onedimension;

import java.util.Scanner;

public class ReverseArray {

    public static void main(String[] args) {

        Scanner scan=new Scanner(System.in);

        System.out.println("enter the size of an array");

        int n=scan.nextInt();

        int a[]=new int[n];
    }
}

```

```

    int b[]=new int[n];
    int ind=n-1;
    for(int i=0;i<a.length;i++)
    {
        System.out.println("enter elements");
        a[i]=scan.nextInt();
    }
    System.out.println("Original elements");
    for(int i=0;i<a.length;i++)
    {
        System.out.print(a[i]+" ");
    }
    System.out.println();
    System.out.println("reversed elements");
    for(int i=0;i<a.length;i++)
    {
        b[i]=a[ind];
        System.out.print(b[i]+" ");
        ind--;
    }

}
}

```

Output:

```
Console × Coverage Declaration Terminal 1
<terminated> ReverseArray [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (14-Aug-2023, 12:31:07 am – 12:31:16 am) [pid: 14020]
enter the size of an array
4
enter elements
12
enter elements
34
enter elements
54
enter elements
345
Original elements
12 34 54 345
reversed elements
345 54 34 12
```

Program 6:

```
package onedimension;

import java.util.Scanner;

public class SingleArray {

    public static void main(String[] args) {

        Scanner scan=new Scanner(System.in);

        System.out.println("enter the size of array");

        int n=scan.nextInt();

        int a[]=new int[n];

        for(int i=0;i<a.length;i++)
        {

            System.out.println("enter elements");

            a[i]=scan.nextInt();
```

```

    }
    System.out.println();
    for(int i=0;i<a.length;i++)
    {
        System.out.print(a[i]+" ");
    }
    System.out.println();
    System.out.println("Enter the key to search");
    int key=scan.nextInt();
    boolean present=false;
    for(int i=0;i<a.length;i++)
    {
        if(a[i]==key)
        {
            System.out.println("element is present at index"+i);
            present =true;
            break;
        }
    }
    if(present==false)
    {
        System.out.println("key not present");
    }
}
}

```

Output:

```
Console x Coverage Declaration Terminal 1
<terminated> SingleArray [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (14-Aug-2023, 12:33:15 am – 12:33:22 am) [pid: 9472]
enter the size of array
4
enter elements
1
enter elements
2
enter elements
4
enter elements
5

1 2 4 5
Enter the key to search
4
element is present at index2
```

```
Console x Coverage Declaration Terminal 1
<terminated> SingleArray [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (14-Aug-2023, 12:34:49 am – 12:34:55 am) [pid: 14260]
enter the size of array
4
enter elements
1
enter elements
2
enter elements
3
enter elements
4

1 2 3 4
Enter the key to search
5
key not present
```

Program 7:

```
package onedimension;

import java.util.Scanner;

public class Sum {

    public static void main(String[] args) {

        Scanner scan=new Scanner(System.in);
```

```
System.out.println("enter the size of an array");
int n=scan.nextInt();
int a[]=new int[n];
int b[]=new int[n];
int c[]=new int[n];
for(int i=0;i<a.length;i++)
{
    System.out.println("enter elements");
    a[i]=scan.nextInt();
}
for(int i=0;i<a.length;i++)
{
    System.out.print(a[i]+" ");
}
System.out.println();
for(int i=0;i<b.length;i++)
{
    System.out.println("enter elements");
    b[i]=scan.nextInt();
}
for(int i=0;i<b.length;i++)
{
    System.out.print(b[i]+" ");
}
System.out.println();
System.out.println("sum of two arrays");
for(int i=0;i<c.length;i++)
```

```

        {

            c[i]=a[i]+b[i];

            System.out.print(c[i]+" ");

        }

    }

}

```

Output:

```

Console x Coverage Declaration Terminal 1
<terminated> Sum [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (14-Aug-2023, 12:36:38 am - 12:36:52 am) [pid: 7860]
enter the size of an array
4
enter elements
1
enter elements
2
enter elements
34
enter elements
4
1 2 34 4
enter elements
4
enter elements
5
enter elements
2
enter elements
2
4 5 2 2
sum of two arrays
5 7 36 6

```