

72. Write a program to input and store the weight of ten people. Sort and display them in descending order using the bubble sort technique.

Ans. import java.io.*;

class Sort

```
{
    int A[] = new int[10];
    int i, j, t;
    void display()throws IOException
    {
        BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
        for(i = 0; i < 10; i++)
        {
            System.out.println("Enter Weight");
            A[i] = Integer.parseInt(br.readLine());
        }
        for(i = 0; i < 10; i++)
        {
            for(j = i + 1; j < 10; j++)
            {
                if(A[i] < A[j])
                {
                    t = A[i];
                    A[i] = A[j];
                    A[j] = t;
                }
            }
        }
        for(i = 0; i < 10; i++)
        {
            System.out.println(A[i]);
        }
    }
}
```

71. Write a program to perform binary search on a list of integers given below, to search for an element input by the user, if it is found display the element along with its position, otherwise display the message "Search element not found".

5, 7, 9, 11, 15, 20, 30, 45, 89, 97

Ans. import java.io.*;

public class BSearch

```
{
    int A[] = {5, 7, 9, 11, 15, 20, 30, 45, 89, 97};
    int low, high, mid, flag = 0;
    void display(int n)
```

```

{
    low = 0;
    high = A.length - 1;
    while(low <= high)
    {
        mid = (low + high)/2;
        if(n > A[mid])
        {
            low = mid + 1;
        }
        else if(n < A[mid])
        {
            high = mid - 1;
        }
        else
        {
            flag = 1;
            break;
        }
    }
    if(flag == 1)
    {
        System.out.println(n + " Found at position " + (mid + 1));
    }
    else
    {
        System.out.println("Search element not found");
    }
}
}
}

```

74. Write a program to store 6 elements in an array P, and 4 elements in an array Q and produce a third array R, containing all the elements of array P and Display the resultant array.

EXAMPLE :	INPUT	OUTPUT
P[]	Q[]	R[]
4	19	4
6	23	6
1	7	1
2	8	2
3		3
10		10
		19
		23
		7
		8

```

Ans. import java.io.*;
class Merge

```

```

int P[] = new int[6];
int Q[] = new int[4];
int R[] = new int[10];
int i, j;
void display()throws IOException
{
    BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
    for(i = 0; i < 6; i++)
    {
        System.out.println("Enter a number");
        P[i] = Integer.parseInt(br.readLine());
    }
    for(i = 0; i < 4; i++)
    {
        System.out.println("Enter a number");
        Q[i] = Integer.parseInt(br.readLine());
    }
    for(i = 0; i < 6; i++)
    {
        R[i] = P[i];
    }
    for(i = 6, j = 0; j < 4; j++, i++)
    {
        R[i] = Q[j];
    }
    for(i = 0; i < 10; i++)
    {
        System.out.println(R[i]);
    }
}
}

```

75. Write a program to input integer elements into an array of size 20 and perform the following operations:

- (i) Display largest number from the array.
- (ii) Display smallest number from the array.
- (iii) Display sum of all the elements of the array.

```

Ans. import java.util.*;
class array
{
    public static void main(String args[])
    {
        Scanner sc =new Scanner(System. in);
        System.out.println("Enter numbers");
        int a[ ]=new int [20];
        for(int i=0;i<20;i++)
        {
            a[i]=sc.nextInt();
        }
        int max=a[0];
    }
}

```

```

int min=a[0];
int sum= 0;
for(int i=0;i<20;i++)
{
    if( a[i]>max)
    max = a[i];
    else if(a[i]<min)
    min=a[i];
    sum=sum+ a[i];
}
System.out.println("largest number is"+ max);
System.out.println("smallest number is"+min);
System.out.println("sum is "+ sum);
}
}

```

76. The annual examination results of 50 students in a class is tabulated as follows :

Roll no.	Subject ₹ A	Subject ₹ B	Subject ₹ C
.....

Write a program to read the data, calculate and display the following :

- Average mark obtained by each student.
- Print the roll number and average marks of the students whose average mark is above 80.
- Print the roll number and average marks of the students whose average mark is below 40.

Ans. import java.io.*;

```
public class AnExam
```

```

{
    int rno[] = new int[50];
    double a[] = new double[50];
    double b[] = new double[50];
    double c[] = new double[50];
    double avg[] = new double[50];
    int i;
    void readData()throws IOException
    {
        BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
        for(i = 0; i <= 50; i++)
        {
            System.out.println("Roll no and marks in 3 subjects of a student");
            rno[i] = Integer.parseInt(br.readLine());
            a[i] = Double.parseDouble(br.readLine());
            b[i] = Double.parseDouble(br.readLine());
            c[i] = Double.parseDouble(br.readLine());
            avg[i] = (a[i] + b[i] + c[i])/3;
        }
    }
    void display()
    {
        System.out.println("Roll No. \t Subject A \t Subject B \t Subject C \t Average");
        for(i = 0; i < 50; i++)
        {
            System.out.println(rno[i] + "\t" + a[i] + "\t" + b[i] + "\t" + c[i] + "\t" + avg[i]);
        }
    }
}

```

```
    }  
    System.out.println("Students whose average is above 80");  
    for(i = 0; i < 50; i++)  
    {  
        if(avg[i] > 80)  
        {  
            System.out.println(rno[i] + "\t" + a[i] + "\t" + b[i] + "\t" + c[i] + "\t" + avg[i]);  
        }  
    }  
    System.out.println("Students whose average is below 40");  
    for(i = 0; i < 50; i++)  
    {  
        if(avg[i] < 40)  
        {  
            System.out.println(rno[i] + "\t" + a[i] + "\t" + b[i] + "\t" + c[i] + "\t" + avg [i]);  
        }  
    }  
}
```