

Program 1:

```
import java.util.*;
public class Array_Assignment {
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int a1[]=new int[5];
        int a2[]=new int[3];
        System.out.println("Enter array 1: ");
        for(int i=0;i<a1.length;i++){
            a1[i]=sc.nextInt();
        }
        System.out.println("Enter array 2: ");
        for(int i=0;i<a2.length;i++){
            a2[i]=sc.nextInt();
        }
        for(int i=0;i<a1.length;i++){
            System.out.print(a1[i]+" ");
            if(a2.length!=i) {
                for (int j = i; j >= i; j--) {
                    System.out.print(a2[j] + " ");
                }
            }
        }
    }
}
```

Program 2:

```
import java.util.*;
public class Array_Assignment {
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int sum=0;
        int a[]={5,14,35,89,140};
        int b[]=new int[5];
        for(int i=0;i<a.length;i++){
            for(int j=i;j<3+i;j++) {
                sum = sum + a[j];
            }
            b[i]=sum/3;
        }
    }
}
```

```
        System.out.print(b[i]+" ");
        sum=0;
    }
}
```

Program 3:

```
import java.util.*;
public class Array_Assignment {
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int a[]=new int[7];
        for(int i=1;i<a.length;i++){
            if(i%2==1){
                a[i-1]=i*i*i;
            }
            else{
                a[i-1]=i*i;
            }
            System.out.print(a[i-1]+" ");
        }
    }
}
```

Program 4:

```
import java.util.*;
public class Array_Assignment {
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int a[]=new int[5];
        int flag1=0,flag2=0;
        System.out.println("Enter numbers: ");
        for(int i=0;i<a.length;i++){
            a[i]=sc.nextInt();
        }
        int i=0;
        while((flag1==0||flag2==0)&& i<a.length-1) {
            if (a[i]<a[i+1]){
                flag1=1;
            }
        }
    }
}
```

```
    }
    else if(a[i]>a[i+1]){
        flag2=1;
    }
    i++;
}
if(flag1==0){
    System.out.println("Descending");
}
else if(flag2==0){
    System.out.println("Ascending");
}
else{
    System.out.println("Random");
}
}
}
```

Program 5:

```
import java.util.*;
public class Array_Assignment {
    public static int thirdLargest(int a[]){
        int max1,max2,max3;
        max1=max2=max3=a[0];
        for(int i=0;i<a.length;i++){
            if(max1<a[i]){
                max3=max2;
                max2=max1;
                max1=a[i];
            }
            else if(max2<a[i]){
                max3=max2;
                max2=a[i];
            }
            else{
                max3=a[i];
            }
        }
        return max3;
    }
}
```

```
}  
public static void main(String[] args) {  
    Scanner sc=new Scanner(System.in);  
    int a[]={24,54,31,16,82,45,67};  
    System.out.println("Third largest number in an array is: "+thirdLargest(a));  
}  
}
```