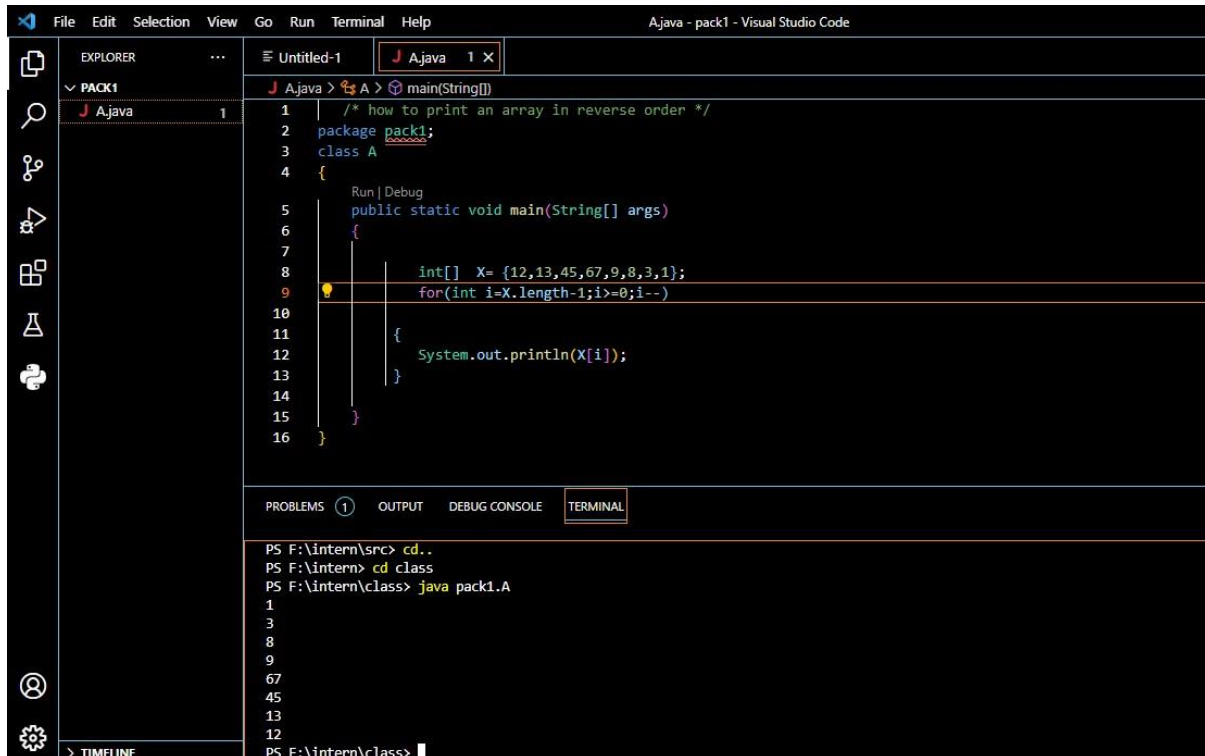


Array programming examples :-

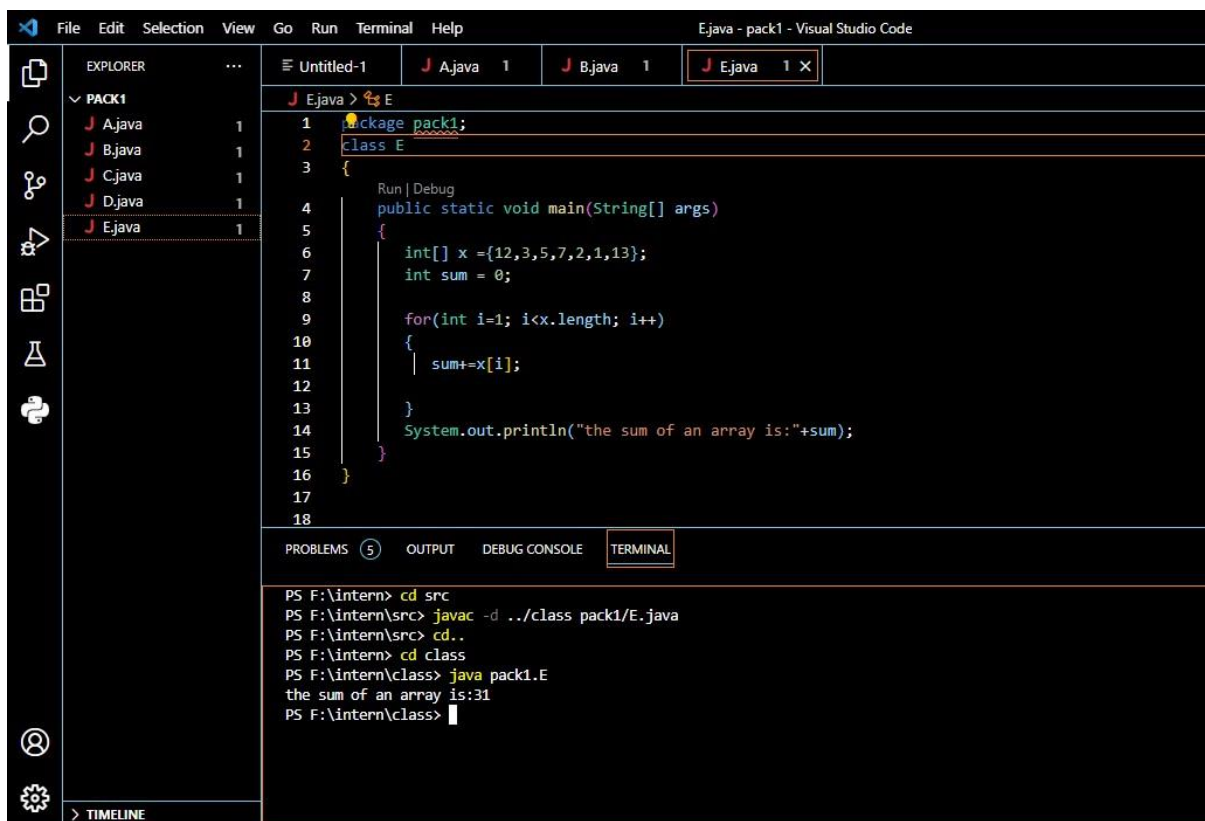


The screenshot shows the Visual Studio Code interface with a Java file named 'A.java' open. The code defines a class 'A' with a 'main' method that prints an array in reverse order. The terminal shows the execution of the program, which outputs the array elements in reverse order: 1, 3, 8, 9, 67, 45, 13, 12.

```
1  /* how to print an array in reverse order */
2  package pack1;
3  class A
4  {
5      public static void main(String[] args)
6      {
7          int[] X= {12,13,45,67,9,8,3,1};
8          for(int i=X.length-1;i>=0;i--)
9          {
10             System.out.println(X[i]);
11         }
12     }
13 }
```

Terminal output:

```
PS F:\intern\src> cd..
PS F:\intern> cd class
PS F:\intern\class> java pack1.A
1
3
8
9
67
45
13
12
PS F:\intern\class>
```



The screenshot shows the Visual Studio Code interface with a Java file named 'E.java' open. The code defines a class 'E' with a 'main' method that calculates the sum of an array. The terminal shows the execution of the program, which outputs the sum of the array: 31.

```
1  package pack1;
2  class E
3  {
4      public static void main(String[] args)
5      {
6          int[] x={12,3,5,7,2,1,13};
7          int sum = 0;
8          for(int i=1; i<x.length; i++)
9          {
10             sum+=x[i];
11         }
12         System.out.println("the sum of an array is:"+sum);
13     }
14 }
```

Terminal output:

```
PS F:\intern> cd src
PS F:\intern\src> javac -d ../class pack1/E.java
PS F:\intern\src> cd..
PS F:\intern> cd class
PS F:\intern\class> java pack1.E
the sum of an array is:31
PS F:\intern\class>
```

The screenshot shows the Visual Studio Code interface with the title bar "Djava - pack1 - Visual Studio Code". The Explorer sidebar on the left shows a project named "PACK1" containing files "A.java", "B.java", "C.java", and "D.java". The editor displays the code for "D.java", which defines a package "pack1", a class "D", and a "main" method. The method initializes an array `x` with values {12, 3, 5, 7, 2, 1, 13}, sets `min` to `x[0]`, and iterates through the array to find the minimum value. The output of the program is "the min value in an array is:1". The terminal at the bottom shows the execution steps: navigating to the source directory, compiling with `javac -d ../class pack1/D.java`, and running with `java pack1.D`.

```
1 package pack1;
2 class D
3 {
4     public static void main(String[] args)
5     {
6         int[] x = {12,3,5,7,2,1,13};
7         int min = x[0];
8
9         for(int i=1; i<x.length; i++)
10        {
11            if(x[i] < min)
12            {
13                min = x[i];
14            }
15        }
16        System.out.println("the min value in an array is:"+min);
17    }
18 }
```

PS F:\> cd intern
PS F:\intern> cd src
PS F:\intern\src> javac -d ../class pack1/D.java
PS F:\intern\src> cd..
PS F:\intern> cd class
PS F:\intern\class> java pack1.D
the min value in an array is:1
PS F:\intern\class>

The screenshot shows the Visual Studio Code interface with the title bar "Cjava - pack1 - Visual Studio Code". The Explorer sidebar on the left shows the same "PACK1" project with files "A.java", "B.java", and "C.java". The editor displays the code for "C.java", which defines a package "pack1", a class "C", and a "main" method. The method initializes an array `x` with values {12, 3, 5, 7, 2, 1, 13}, sets `max` to `x[0]`, and iterates through the array to find the maximum value. The output of the program is "the max value in an array is:13". The terminal at the bottom shows the execution steps: navigating to the source directory, compiling with `javac -d ../class pack1/C.java`, and running with `java pack1.C`.

```
1 package pack1;
2 class C
3 {
4     public static void main(String[] args)
5     {
6         int[] x = {12,3,5,7,2,1,13};
7         int max = x[0];
8
9         for(int i=1; i<x.length; i++)
10        {
11            if(x[i] > max)
12            {
13                max = x[i];
14            }
15        }
16        System.out.println("the max value in an array is:"+max);
17    }
18 }
```

PS F:\intern\src\pack1> cd..
PS F:\intern\src> javac -d ../class pack1/C.java
PS F:\intern\src> cd..
PS F:\intern> cd class
PS F:\intern\class> java pack1.C
the max value in an array is:13
PS F:\intern\class>

Visual Studio Code interface showing a Java project named "Fjava" in the "pack1" package. The Explorer sidebar shows the file structure with "F.java" selected. The main editor displays the code for "F.java", which calculates the average of the first and second halves of an array.

```
1 package pack1;
2 class F
3 {
4     public static void main(String[] args)
5     {
6         int[] x = {12,3,5,7,2,1,13};
7         int mid=x.length/2;
8         int sum = 0;
9
10        for(int i=1; i<mid; i++)
11        {
12            sum+=x[i];
13        }
14        double avg=sum/mid;
15        System.out.println("the average of first half of an array is:"+avg);
16        sum=0;
17        avg=0.0;
18        for(int i=mid;i<x.length;i++)
19        {
20            sum+=x[i];
21        }
22        avg=sum/mid;
23        System.out.println("the average of second half of an array is:"+avg);
24    }
25 }
26
27
28
29
```

The Terminal panel shows the execution of the code:

```
PS F:\intern\src> javac -d ../class pack1/F.java
PS F:\intern\src> cd..
PS F:\intern> cd class
PS F:\intern\class> java pack1.F
the average of first half of an array is:2.0
the average of second half of an array is:7.0
PS F:\intern\class>
```