

```

1  abstract class Furniture {
2
3      protected String color;
4      protected int width;
5      protected int height;
6      public abstract void accept();
7      public abstract void display();
8  }
9
10     class chair extends Furniture {
11
12         private int numOf_legs;
13
14         public void accept() {
15
16             color = "Black";
17             width = 40;
18             height = 45;
19             numOf_legs = 4;
20         }
21
22         public void display() {
23             System.out.println("DISPLAYING VALUE FOR CHAIR")
24             System.out.println("=====");
25             System.out.println("Color is" + color);
26             System.out.println("Width is" + width);
27             System.out.println("Height is" + height);
28             System.out.println("Number of legs is" + numOf_l
29             System.out.println(" ");
30         }
31     }
32
33     class Bookshelf extends Furniture {
34
35         private int numOf_shelves;
36
37         public void accept() {
38
39             color ="Brown";
40             width = 72;
41             height = 80;
42             numOf_shelves = 5;
43         }
44
45         public void display () {
46             System.out.println("DISPLAYING VALUES FOR BOOKS
47             System.out.println

```

```
45
46 System.out.println("Color is" + color);
47 System.out.println("Width is" + width);
48 System.out.println("Height is" + height);
49 System.out.println("Number of shelves is" + num01);
50 System.out.println(" ");
51 }
52 }
53
54 class FurnitureDemo {
55     public static void main(String[] args) {
56         Bookshelf b1 = new Bookshelf();
57         b1.accept();
58         b1.display();
59
60
61         chair c1 = new chair ();
62         c1.accept();
63         c1.display();
64
65     }
66 }
```

DISPLAYING VALUES FOR BOOKSHELF

=====

Color isBrown

Width is72

Height is80

Number of shelves is5

DISPLAYING VALUE FOR CHAIR

=====

Color isBlack

Width is40

Height is45

Number of legs is4

Process finished.

```

1  import java.util.*;
2
3  class Height
4  {
5      private int feet;
6      private int inches;
7
8      public void getDistance()
9      {
10         Scanner sc=new Scanner(System.in);
11
12         System.out.print("Enter feet: ");
13         feet=sc.nextInt();
14         System.out.print("Enter inches: ");
15         inches=sc.nextInt();
16     }
17     public void showDistance()
18     {
19         System.out.println("Feet: "+ feet + "\tInches:
20     }
21
22     public void addDistance(Height H1, Height H2)
23     {
24         inches=H1.inches+H2.inches;
25         feet=H1.feet+H2.feet+(inches/12);
26         inches=inches%12;
27     }
28 }
29
30 public class Main
31 {
32     public static void main(String []s)
33     {
34         try
35         {
36
37             Height H1=new Height();
38             Height H2=new Height();
39             Height H3=new Height();
40
41             //read first Height
42             System.out.println("Name:pavan kumar");
43             System.out.println("Sap id:51834695");
44             System.out.println("Enter first Height: ");

```

```
44     System.out.println("Enter first Height: ");
45     H1.getDistance();
46
47     //read second Height
48     System.out.println("Enter second Height: ");
49     H2.getDistance();
50
51     //add heights
52     H3.addDistance(H1,H2);
53     //print Height
54     System.out.println("Total Height is:" );
55     H3.showDistance();
56 }
57 catch (Exception e)
58 {
59     System.out.println("Exception occurred :"+ e.
60 }
61 }
62 }
```

```
Name:pavan kumar  
Sap id:51834695  
Enter first Height:  
Enter feet: 6  
Enter inches: 20  
Enter second Height:  
Enter feet: 5  
Enter inches: 25  
Total Height is:  
Feet: 14 Inches: 9  
  
Process finished.
```

```

1  import java.util.*;
2  public class Main
3  {
4      public static void main(String[] args)
5      {
6          int i,j,k;
7          Scanner sc=new Scanner(System.in);
8          System.out.println("Name:pavan kumar");
9          System.out.println("Sap id:51834695");
10         System.out.println("enter no.of rows");
11
12         int n=sc.nextInt();
13
14         for(i=0; i<n; i++)
15         {
16             //inotializing k as one
17             k=1;
18             for(j=0; j<(n+i); j++)
19             {
20                 if(j<n-i-1)
21                     //prints space in the less than n-i-
22                     System.out.print(" ");
23                 else
24                 {
25                     // else prints k
26                     System.out.print(+ k);
27                     if(j<(n-1))
28                         // if j is greater than n-1
29                         //increases to k+1
30                         k++;
31
32                     else
33                         //if not k as k-1
34                         k--;
35                 }
36             }
37             System.out.println(" ");
38         }
39     }
40
41
42 }

```



```
Name:pavan kumar  
Sap id:51834695  
enter no.of rows  
5
```

```
  1
```

```
 121
```

```
12321
```

```
1234321
```

```
123454321
```

```
Process finished.  
|
```



```

1  import java.util.*;
2
3  class Main
4  {
5      public static int[] remove(int[] x, int key) {
6
7          List<Integer> result = new ArrayList<>();
8
9          for (int y: x) {
10             if (y != key) {
11                 result.add(y);
12             }
13         }
14
15         return result.stream()
16             .mapToInt(Integer::intValue)
17             .toArray();
18     }
19
20     public static void main(String[] args) {
21         int[] x = { 1, 4,6,1,2,3,1, 0};
22         int key = 1;
23
24         x = remove(x, key);
25         System.out.println("Name:pavan kumar");
26         System.out.println ("Sap id:51834695");
27         System.out.println(Arrays.toString(x));
28     }
29 }

```

```
Name:pavan kumar  
Sap id:51834695  
[4, 6, 2, 3, 0]  
  
Process finished.
```