

```

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 + " I
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();

```



```

1
2
3
4
5
6  es;
7
8  istance()
9
10 w Scanner(System.in);
11
12 int("Enter feet: ");
13 nt();
14 int("Enter inches: ");
15 tInt();
16
17 istance()
18
19 intln("Feet: "+ feet + "  Inches: "+ inches);
20
21
22 istance(Height H1, Height H2)
23
24 hes+H2.inches;
25 H2.feet+(inches/12);
26 %12;
27
28
29
30
31
32 id main(String []s)
33
34
35
36

```

```

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

```

```
27
28
29
30
31
32 id main(String []s)
33
34
35
36
37 =new Height();
38 =new Height();
39 =new Height();
40
41 rst Height
42 t.println("Name : O.Jahnavi\nSAP ID:51834504");
43 t.println("Enter first Height: ");
44 tance();
45
46 cond Height
47 t.println("Enter second Height: ");
48 tance();
49
50 ghts
51 tance(H1,H2);
52 eight
53 t.println("Total Height is:" );
54 stance();
55
56 ion e)
57
58 t.println("Exception occurred :"+ e.toString());
59
60
61
```

```
Name : O.Jahnavi
SAP ID:51834504
Enter first Height:
Enter feet: 6
Enter inches: 2
Enter second Height:
Enter feet: 8
Enter inches: 6
Total Height is:
Feet: 14  Inches: 8

Process finished.
```



```

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 = "Brown";
17             width = 36;
18             height = 48;
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_legs);
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 = "Black";

```

```

1 Furniture {
2
3 ring color;
4 t width;
5 t height;
6 act void accept();
7 act void display();
8
9 ir extends Furniture {
10 numOf_legs;
11
12 accept() {
13
14   wn";
15
16
17   4;
18
19 d display()    {
20 rintln("DISPLAYING VALUE FOR CHAIR");
21 rintln("=====");
22 rintln("Color is " + color);
23 rintln("Width is " + width);
24 rintln("Height is " + height);
25 rintln("Number of legs is " + numOf_legs);
26 rintln(" ");
27
28
29
30 lf extends Furniture {
31
32 numOf_shelves;
33
34 accept()  {
35
36 ck";

```





```

34 accept()
35
36 ck";
37
38 ;
39 es = 4;
40
41 display () {
42 println("DISPLAYING VALUES FOR BOOKSHELF");
43 println
44 =====");
45
46 rintln("Color is " + color);
47 rintln("Width is " + width);
48 rintln("Height is " + height);
49 rintln("Number of shelves is " + num0f_shelves);
50 rintln(" ");
51
52
53
54 reDemo {
55 c void main(String[] args)
56
57 println("Name : O.Jahnavi\nSAP ID : 51834504");
58 1 = new Bookshelf();
59 ;
60 );
61
62
63 new chair ();
64 ;
65 );
66
67
68

```

Name : O.Jahnavi

SAP ID : 51834504

DISPLAYING VALUES FOR BOOKSHELF

=====

Color is Black

Width is 72

Height is 84

Number of shelves is 4

DISPLAYING VALUE FOR CHAIR

=====

Color is Brown

Width is 36

Height is 48

Number of legs is 4

Process finished.

```

1  import java.util.Scanner;
2  class RemovingEvenOccurence
3  {
4      public static void main(String args[])
5      {
6          System.out.println("Name : O.Jahnavi\SAP ID
7          Scanner sc=new Scanner(System.in);
8          System.out.println("Enter the size of the ar
9          int n=sc.nextInt();
10         int arr[]=new int[n];
11         int i,j,k,count;
12         System.out.print("Enter "+n+" elements : ");
13         for(i=0;i<n;i++)
14         {
15             arr[i]=sc.nextInt();
16         }
17         System.out.print("Input : ");
18         System.out.print("{");
19         for(i=0;i<n;i++)
20         {
21             System.out.print(arr[i]);
22             if(i!=n-1)
23             {
24                 System.out.print(",");
25             }
26         }
27         System.out.print("}\n");
28         for(i=0;i<n;i++)
29         {
30             count=1;
31             for(j=i+1;j<n;j++)
32             {
33                 if(arr[i]==arr[j])
34                 {
35                     count++;
36                     if(count%2==0)
37                     {
38                         for(k=j;k<n-1;k++)
39                         {

```

```

1  il.Scanner;
2  gEvenOccurence
3
4  ic void main(String args[])
5
6  t.println("Name : O.Jahnavi\SAP ID : 51834504");
7  c=new Scanner(System.in);
8  .println("Enter the size of the array : ");
9  extInt();
10 new int[n];
11 count;
12 .print("Enter "+n+" elements : ");
13 n;i++)
14
15 c.nextInt();
16
17 .print("Input : ");
18 .print("{");
19 n;i++)
20
21 ut.print(arr[i]);
22 1)
23
24 .out.print(",");
25
26
27 .print("}\n");
28 n;i++)
29
30
31 1;j<n;j++)
32
33 [i]==arr[j])
34
35 t++;
36 ount%2==0)
37
38 r(k=j;k<n-1;k++)

```



```

28     for(i=0;i<n;i++)
29     {
30         count=1;
31         for(j=i+1;j<n;j++)
32         {
33             if(arr[i]==arr[j])
34             {
35                 count++;
36                 if(count%2==0)
37                 {
38                     for(k=j;k<n-1;k++)
39                     {
40                         arr[k]=arr[k+1];
41                     }
42                     n--;
43                     j--;
44                 }
45             }
46         }
47     }
48     System.out.print("Output : ");
49     System.out.print("{");
50     for(i=0;i<n;i++)
51     {
52         System.out.print(arr[i]);
53         if(i!=n-1)
54         {
55             System.out.print(",");
56         }
57     }
58     System.out.print("}\n");
59 }
60 }

```

Name : O.Jahnavi

SAP ID : 51834504

Enter the size of the array :

10

Enter 10 elements : 1 23 1 2 4 23 2 5 6 2

Input : {1,23,1,2,4,23,2,5,6,2}

Output : {1,23,2,4,5,6,2}

Process finished.

|

```

1 public class Main
2 {
3     public static void main(String[] args)
4     {
5         System.out.println("Name : O.Jahnavi\nSA
6         int i,j,k;
7         for(i=1;i<=5;i++)
8         {
9             for(j=5;j>i;j--)
10            {
11                System.out.print(" ");
12            }
13            if(i%2!=0)
14            {
15                for(j=1,k=1;j<=2*i-1;j++)
16                {
17                    if(j<i)
18                    {
19                        System.out.print(k);
20                        k++;
21                    }
22                    else
23                    {
24                        System.out.print(k);
25                        k--;
26                    }
27                }
28            }
29            else
30            {
31                for(j=1,k=i;j<=2*i-1;j++)
32                {
33                    if(j<i)
34                    {
35                        System.out.print(k);
36                        k--;
37                    }
38                    else
39                    {

```

```

1
2
3 void main(String[] args)
4
5 .println("Name : O.Jahnavi\nSAP ID : 51834504");
6
7 =5;i++)
8
9 5;j>i;j--)
10
11 stem.out.print(" ");
12
13 !=0)
14
15 r(j=1,k=1;j<=2*i-1;j++)
16
17     if(j<i)
18     {
19         System.out.print(k);
20         k++;
21     }
22     else
23     {
24         System.out.print(k);
25         k--;
26     }
27
28
29
30
31 r(j=1,k=i;j<=2*i-1;j++)
32
33     if(j<i)
34     {
35         System.out.print(k);
36         k--;
37     }
38     else

```



```
16     {
17         if(j<i)
18         {
19             System.out.print(k);
20             k++;
21         }
22         else
23         {
24             System.out.print(k);
25             k--;
26         }
27     }
28 }
29 else
30 {
31     for(j=1, k=i; j<=2*i-1; j++)
32     {
33         if(j<i)
34         {
35             System.out.print(k);
36             k--;
37         }
38         else
39         {
40             System.out.print(k);
41             k++;
42         }
43     }
44 }
45     System.out.println();
46 }
47 }
48 }
```

Name : O.Jahnavi  
SAP ID : 51834504  
1  
212  
12321  
4321234  
123454321

Process finished.

```
1 import java.util.Scanner;
2 class PatternCap
3 {
4     public static void main(String[] args)
5     {
6         System.out.println("Name : O.Jahnavi\nSA");
7         Scanner sc=new Scanner(System.in);
8         System.out.println("Enter the number of");
9         int n=sc.nextInt();
10        float sum=1;
11        int j=1;
12        for(int i=2;i<=n;i++)
13        {
14            j=j+2;
15            sum=sum+(j^2/j^3);
16        }
17        System.out.println(sum);
18    }
19 }
```

```
1  canner;  
2  
3  
4  void main(String[] args)  
5  
6  .println("Name : O.Jahnavi\nSAP ID : 51834504");  
7  =new Scanner(System.in);  
8  .println("Enter the number of series :");  
9  extInt();  
10 l;  
11  
12 2;i<=n;i++)  
13  
14  
15 l+=(j^2/j^3);  
16  
17 .println(sum);  
18  
19
```



Name : O.Jahnavi  
SAP ID : 51834504  
Enter the number of series :  
3  
7.0

Process finished.