```
class Calculator
 {
    int add(int... val)
    {
        int sum=0;
        for(int a: val)
        {
            sum=sum+a;
        }
        return sum;
    }
    double add(double... val)
    {
        double sum=0;
        for(double a: val)
        {
            sum=sum+a;
        }
        return sum;
    }
    float add(float... val)
    {
      float sum=0.0f;
      for(float a: val)
      {
        sum=sum+a;
      }
      return sum;
    }
    int sub(int... val)
    {
        int diff=0;
        for(int a: val)
        {
            diff=diff-a;
            if(a==val[0])
            {
                diff=-diff;
            }
```

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```
            diff=diff-a;
            if(a==val[0])
            {
                diff=-diff;
            }
        }
        return diff;
    }
    double sub(double... val)
    {
        double diff=0.0;
        for(double a: val)
        {
            if(a==val[0])
            {
                diff=a;
            }
            else
            {
              diff=diff-a;
            }
        }
        return diff;
    }
    float sub(float... val)
    {
        float diff=0;
        for(float a: val)
        {
            diff=diff-a;
            if(a==val[0])
            {
                diff=-diff;
            }
        }
        return diff;
    }
    int mul(int... val)
```

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```
70          return diff;
71      }
72      int mul(int... val)
73      {
74          int mul=1;
75          for(int a: val)
76          {
77              mul=mul*a;
78          }
79          return mul;
80      }
81      double mul(double... val)
82      {
83          double mul=1;
84          for(double a: val)
85          {
86              mul=mul*a;
87          }
88          return mul;
89      }
90      float mul(float... val)
91      {
92          float mul=1;
93          for(float a: val)
94          {
95              mul=mul*a;
96          }
97          return mul;
98      }
99      double div(int... val)
100     {
101         double div=0.0;
102         for(int a: val)
103         {
104           if(a==val[0])
105             div=a;
106           else
107             div=div/a;
108         }
```

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```
106             else
107               div=div/a;
108           }
109           return div;
110       }
111       double div(double... val)
112       {
113           double div=0.0;
114           for(double a: val)
115           {
116             if(a==val[0])
117               div=a;
118             else
119               div=div/a;
120           }
121           return div;
122       }
123       float div(float... val)
124       {
125           float div=0.0f;
126           for(float a: val)
127           {
128             if(a==val[0])
129               div=a;
130             else
131               div=div/a;
132           }
133           return div;
134       }
135   }
136   class check
137   {
138       public static void main(String args[])
139       {
140         System.out.println("Name : O.Jahnavi\nSAP
141         Calculator c=new Calculator();
142         System.out.println("sum of 1,2,3 : "+c.add
143         System.out.println("sum of 1.1,2.2,3.3 : "
144         System.out.println("sum of 1.2,2,3.1 : "+c
```

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```
121             return div;
122         }
123         float div(float... val)
124         {
125             float div=0.0f;
126             for(float a: val)
127             {
128               if(a==val[0])
129                 div=a;
130               else
131                 div=div/a;
132             }
133             return div;
134         }
135 }
136 class check
137 {
138     public static void main(String args[])
139     {
140       System.out.println("Name : O.Jahnavi\nSAP
141       Calculator c=new Calculator();
142       System.out.println("sum of 1,2,3 : "+c.add
143       System.out.println("sum of 1.1,2.2,3.3 : "
144       System.out.println("sum of 1.2,2,3.1 : "+c
145       System.out.println("Difference of 1,2,3 :
146       System.out.println("Difference of 1.2,2,3.
147       System.out.println("Multiplication of 1,6
148       System.out.println("Mulitiplication of 1.2
149       System.out.println("Division of 9,6,2 : "+
150       System.out.println("Division of 9.9,3.2,5
151
152     }
153  }
```

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```
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138 ing args[])
139
140 : O.Jahnavi\nSAP ID : 51834504");
141 or();
142 f 1,2,3 : "+c.add(1,2,3));
143 f 1.1,2.2,3.3 : "+c.add(1.1,2.2,3.3));
144 f 1.2,2,3.1 : "+c.add(1.2f,2,3.1f));
145 rence of 1,2,3 : "+c.sub(1,2,3));
146 rence of 1.2,2,3.1,1 : "+c.sub(1.2f,2,3.1f,1));
147 plication of 1,6 : "+c.mul(1,6));
148 iplication of 1.2,2 : "+c.mul(1.2f,2));
149 ion of 9,6,2 : "+c.div(9,6,2));
150 ion of 9.9,3.2,5 : "+c.div(9.9,3.2,5));
151
152
153
```

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```
Name : O.Jahnavi
SAP ID : 51834504
sum of 1,2,3 : 6
sum of 1.1,2.2,3.3 : 6.6
sum of 1.2,2,3.1 : 6.3
Difference of 1,2,3 : -4
Difference of 1.2,2,3.1,1 : -4.8999996
Multiplication of 1,6 : 6
Mulitiplication of 1.2,2 : 2.4
Division of 9,6,2 : 0.75
Division of 9.9,3.2,5 : 0.61875

Process finished.
```

Scanned with CamScanner

```java
import java.util.Scanner;
class StringPalindrome
{
    static boolean palindrome(String s)
    {
        if(s.length()==0 || s.length()==1)
        {
            return true;
        }
        if(s.charAt(0)==s.charAt(s.length()-1))
        {
            return palindrome(s.substring(1,s.leng
        }
        return false;
    }
    public static void main(String[] args)
    {
        System.out.println("O.Jahnavi\nSAP ID : 51
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter any String : ");
        String s=sc.nextLine();
        if(palindrome(s))
            System.out.println(s+" is palindrome")
        else
            System.out.println(s+" is not a palind
    }

}
```

Scanned with CamScanner

```
va.util.Scanner;
ingPalindrome

 boolean palindrome(String s)

s.length()==0 || s.length()==1)

 return true;

s.charAt(0)==s.charAt(s.length()-1))

 return palindrome(s.substring(1,s.length()-1));

urn false;

static void main(String[] args)

tem.out.println("O.Jahnavi\nSAP ID : 51834504");
nner sc=new Scanner(System.in);
tem.out.println("Enter any String : ");
ing s=sc.nextLine();
palindrome(s))
 System.out.println(s+" is palindrome");
e
 System.out.println(s+" is not a palindrome");
```

Scanned with CamScanner

```
O.Jahnavi
SAP ID : 51834504
Enter any String :
malayalam
malayalam is palindrome

Process finished.
```

Scanned with CamScanner

```
O.Jahnavi
SAP ID : 51834504
Enter any String :
hello
hello is not a palindrome

Process finished.
```

Scanned with CamScanner

```java
import java.util.Scanner;
public class Main
{
  public static void main (String[] args)
  {
    System.out.println("Name : O.Jahnavi\nSAP ID
    int count=0;
    int rem=0 ;
    Scanner sc=new Scanner(System.in);
    System.out.println("enter a number :");
    int n= sc.nextInt();
    while(n>0)
    {
      rem=n%10;
      if(rem%2!=0)
      {
        count++;
      }
      n=n/10;
    }
    System.out.println("no of odd digits : "+cou
  }
}
```

Scanned with CamScanner

```
il.Scanner;
ain

c void main (String[] args)

.println("Name : O.Jahnavi\nSAP ID : 51834504");
0;
;
=new Scanner(System.in);
.println("enter a number :");
nextInt();


;
!=0)

+;



.println("no of odd digits : "+count);


```

Scanned with CamScanner

```
Name : O.Jahnavi
SAP ID : 51834504
enter a number :
142536
no of odd digits : 3

Process finished.
```

Scanned with CamScanner

```java
class Pattern
{
  public static void main(String args[])
  {
    System.out.println("Name : O.Jahnavi\nSAP I
    int k=1;
    for(int i=1;i<=5;i++)
    {
      for(int j=1;j<=i;j++)
      {
        if(j==1)
        {
          k=j;
        }
        if(i!=4)
        {
          if(i%2==0)
          {
            if(j%2!=0)
            {
              k=j+1;
              System.out.print(k);
              k=k-1;
            }
            else
            {
              System.out.print(k);
            }
          }
          else
          {
            if(j%2==0)
            {
              k=j+1;
              System.out.print(k);
              k=k-1;
            }
```

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```
21                  k=j+1;
22                  System.out.print(k);
23                  k=k-1;
24                }
25                else
26                {
27                  System.out.print(k);
28                }
29              }
30              else
31              {
32                if(j%2==0)
33                {
34                  k=j+1;
35                  System.out.print(k);
36                  k=k-1;
37                }
38                else
39                {
40                  System.out.print(k);
41                }
42              }
43            }
44            else
45            {
46              System.out.print(j);
47            }
48          }
49          System.out.println();
50      }
51    }
52  }
53
```

Scanned with CamScanner

```
Name : O.Jahnavi
SAP ID : 51834504
1
21
132
1234
13254

Process finished.
```

Scanned with CamScanner

```java
import java.util.Scanner;
public class Demo
{
  public static void main(String []args)
  {
    System.out.println("Name : O.Jahnavi\nSAP ID
   Scanner sc = new Scanner(System.in);
   System.out.println("Enter Size :");
   int n = sc.nextInt();
   sc.nextLine();
   String[] str = new String[n];
   System.out.println("enter "+n+" elements : ")
   for (int i=0;i<n;i++)
   {
     str[i]=sc.nextLine();
   }
   for (int i=0;i<n;i++)
   {
     for (int j=i+1;j<n;j++)
     {
        if (str[i].compareTo(str[j])>0)
        {
           String temp = str[j];
           str[j] = str[i];
           str[i] = temp;
        }
     }
    }
    System.out.println("Sorted string : ");
    for (int i=0;i<n;i++)
    {
       System.out.println(str[i]);
    }
  }
}
```

Scanned with CamScanner

```
Name : O.Jahnavi
SAP ID : 51834504
Enter Size :
4
enter 4 elements :
jahnavi
lavanya
bhavana
vyshnavi
Sorted string :
bhavana
jahnavi
lavanya
vyshnavi

Process finished.
```

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