1stAnswer22july.java

Saved

```java

// 1st answer


import java.util.*;

 // Compiler version JDK 11.0.2


class Calculator
{

    public void add(float a,float b, float c)
    {
        System.out.println(a+"+"+b+"+"+c+"="+(a+b+
    }
    public void add(float a,float b)
    {
        System.out.println(a+"+"+b+"="+(a+b));
    }


    public void subtract(float a,float b, float c)
    {
        System.out.println(a+"-"+b+"-"+c+"="+(a-b-
    }
    public void subtract(float a,float b)
    {
        System.out.println(a+"-"+b+"="+(a-b));
    }


    public void product(float a,float b)
    {
        System.out.println(a+"*"+b+"="+(a*b));
    }


    public void division(float a,float b)
    {
        System.out.println(a+"/"+b+"="+(a/b));
    }
}
public class Main
{
    public static void main (String[] args) {
        Calculator cal=new Calculator();
        Scanner sc=new Scanner(System.in);
        System.out.println("Author: P. Hemanth\nSA
        try
```

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```
    }
}
public class Main
{
    public static void main (String[] args) {
        Calculator cal=new Calculator();
        Scanner sc=new Scanner(System.in);
        System.out.println("Author: P. Hemanth\nSA
        try
        {
            System.out.println("1.ADDITION \n2. SU
            int op=sc.nextInt();
            switch(op)
            {
                 case 0:
                    System.out.println("Exit...");
                    System.exit(0);
                    break;
                case 1:
                    System.out.print("Enter a numb
                    float add1=sc.nextFloat();
                    System.out.print("Enter a numb
                    float add2=sc.nextFloat();
                    System.out.print("Enter anothe
                    float add3=sc.nextFloat();
                    if(add3==0)
                    {
                        cal.add(add1, add2);
                    }
                    else
                    {
                        cal.add(add1, add2, add3);
                    }
                    break;
                case 2:
                   System.out.print("Enter a numbe
                    float sub1=sc.nextFloat();
                    System.out.print("Enter a numb
                    float sub2=sc.nextFloat();
                    System.out.print("Enter a numb
                    float sub3=sc.nextFloat();
                    if(sub3==0)
                    {
                        cal.subtract(sub1, sub2);
                    }
                    else
                    {
                        cal.subtract(sub1, sub2, s
                    }
                    break;
```

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```
                    break;
                case 2:
                   System.out.print("Enter a numbe
                    float sub1=sc.nextFloat();
                    System.out.print("Enter a numb
                    float sub2=sc.nextFloat();
                    System.out.print("Enter a numb
                    float sub3=sc.nextFloat();
                    if(sub3==0)
                    {
                        cal.subtract(sub1, sub2);
                    }
                    else
                    {
                        cal.subtract(sub1, sub2, s
                    }
                    break;
                case 3:
                    System.out.print("Enter a numb
                    float mul1=sc.nextFloat();
                    System.out.print("Enter a numb
                    float mul2=sc.nextFloat();
                    cal.product(mul1,mul2);
                    break;
                case 4:
                    System.out.print("Enter a numb
                    float div1=sc.nextFloat();
                    System.out.print("Enter a numb
                    float div2=sc.nextFloat();
                    if(div2==0)
                    {
                        throw new ArithmeticExcept
                    }
                    cal.division(div1,div2);
                    break;
                default:
                    System.out.println("Invalid ch
            }
        }
        catch(InputMismatchException ime)
        {
            System.out.println("Enter only the ind
        }
        catch(ArithmeticException ae)
        {
            System.out.println(ae.getMessage());
        }
    }
}
```

Terminal

```
Author: P. Hemanth
SAP ID:51834553
1.ADDITION
2. SUBTRACTION
3. MULTIPLICATION
4. DIVISION
5. EXIT
Enter your choice:
1
Enter a number: 63
Enter a number: 82
Enter another number if you want or enter 0: 3
63.0+82.0+3.0=148.0

Process finished.
```

2ndAnswer22july.java

Saved

```java

//2nd answer

import java.util.*;

 // Compiler version JDK 11.0.2

public class Palindrome
{
  public static boolean isPalindrome(String str, in
  {
    if (low >= high) {
      return true;
    }

    if (str.charAt(low) != str.charAt(high)) {
      return false;
    }

    return isPalindrome(str, low + 1, high - 1);
  }

  public static void main(String args[])
  {
    Scanner sc=new Scanner(System.in);
      System.out.println("Author:P.Hemanth\nSAP ID:
      System. out. println("------------------");
      System. out. println("enter the string:");
      String str=sc.nextLine();

    if (isPalindrome(str, 0, str.length() - 1)) {

      System.out.print(str+" is Palindrome");
   } else {
      System.out.print(str+" is Not Palindrome");
    }
  }
}
```

Terminal

```
Author:P.Hemanth
SAP ID:51834553
-----------------
enter the string:
hemu
hemu is Not Palindrome
Process finished.
```

3rdAnswer22july.java

Saved

```java

 // 3rd answer

import java.util.*;

 // Compiler version JDK 11.0.2

public class Odd
{
  public static void main (String[] args)
  {
    System.out.println("Author :P.Hemanth\n SAP ID:
    System. out. println("------------");
    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 numbers are: "+cc

  }
}
```

Terminal

```
Author :P.Hemanth
 SAP ID:51834553
------------
enter a number :
527263
no of odd numbers are: 3

Process finished.
```

5thAnswer22july.java

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```java
// 5th answer


import java.util.*;
import java.util.Arrays;

 // Compiler version JDK 11.0.2


class BinarySearch
{
  public static void swap(int[] arr, int a, int b)
  {
    int temp = arr[a];
    arr[a] = arr[b];
    arr[b] = temp;
  }

  public static void bubbleSort(int[] arr, int m)
  {
    for (int a = 0; a < m - 1; a++) {
      if (arr[a] > arr[a + 1]) {
        swap(arr, a, a + 1);
      }
    }
    if (m - 1 > 1) {
      bubbleSort(arr, m - 1);
    }
  }

  public static void main(String[] args)
  {
     Scanner sc=new Scanner(System.in);
       System.out.println("Author:P.Hemanth\n SAP I
       System. out. println("-----------------");
       System. out. println("enter the size of the
         int size=sc.nextInt();
         int arr[]=new int[size];
       System. out. println("enter "+size+" element
         for(int i=0;i<size;i++)
         {
           arr[i]=sc.nextInt();
         }


    bubbleSort(arr, arr.length);

     System. out. println("numbers in the array aft
    System.out.println(Arrays.toString(arr));
  }
```

Terminal

```
Author:P.Hemanth
 SAP ID:51834553
----------------
enter the size of the array:
3
enter 3 elements:
63
82
82
numbers in the array after rearranging:
[63, 82, 82]

Process finished.
```