```java
import java.util.*;
import java.u  lab1_calculator
public class lab1_calculator {
    Run | Debug
    public static void main(String[] args) {
        Scanner reader = new Scanner(System.in);
        int k=0,gcd=1;

        System.out.print(s:"Menu:\n1)add\n2)sub\n3)mul\n4)div\n5)sqrt\n6)power\n7)mean\n8)variance\n9)GCD\n");
        System.out.print(s:"Enter choice: ");
        int i = reader.nextInt();
        double first,second;
        double result;
        switch(i)
        {
            case 1:
                System.out.print(s:"Enter first number: ");
                first = reader.nextDouble();
                System.out.print(s:"Enter second number: ");
                second = reader.nextDouble();
                result = first + second;
                System.out.printf(format:"%.1f + %.1f = %.1f",
                        first,second, result);
                break;
            case 2:
                System.out.print(s:"Enter first number: ");
                first = reader.nextDouble();
                System.out.print(s:"Enter second number: ");
                second = reader.nextDouble();
                result = first - second;
                System.out.printf(format:"%.1f - %.1f = %.1f",
                        first,second, result);
                break;
            case 3:
                System.out.print(s:"Enter first number: ");
                first = reader.nextDouble();
                System.out.print(s:"Enter second number: ");
                second = reader.nextDouble();
                result = first * second;
```

```java
        case 4:
            System.out.print(s:"Enter first number: ");
            first = reader.nextDouble();
            System.out.print(s:"Enter second number: ");
            second = reader.nextDouble();
            result = first / second;
            System.out.printf(format:"%.1f / %.1f = %.1f",
                    first,second, result);
            break;
        case 5:
            System.out.print(s:"Enter second number: ");
            second = reader.nextDouble();
            result = Math.sqrt(second);
            System.out.printf(format:"Square root of %.1f = %.1f",
                    second, result);
            break;
        case 6:
            System.out.print(s:"Enter first number: ");
            first = reader.nextDouble();
            System.out.print(s:"Enter power: ");
            int p = reader.nextInt();
            result = Math.pow(first,p);
            System.out.printf(format:"Power %d of %.1f = %.1f",p,first,
                    result);
            break;
        case 7:


            Scanner sc = new Scanner(System.in);
            int total=0;
            double avg=0;
            int n;
            System.out.print(s:"Please enter end to stop taking input: ");
            while (true)
            {
                String input = sc.nextLine();
                if(input.equals(anObject:"end"))
                break;
                else
                {
```

```java
            System.out.println("Mean is "+avg);


    case 8:
        System.out.print(s:"Enter how many numbers you want to enter: ");
        int o = reader.nextInt();
        int ar[]=new int[o];
        for(int l=0;l<o;l++)
        {
            ar[l] = reader.nextInt();
            k=k+ar[l];;
        }
        int mean=k/o;
        double sqDiff = 0;
        for (int q = 0; q < o; q++)
            sqDiff += (ar[q] - mean) * (ar[q] - mean);
        result=sqDiff/o;
        System.out.printf(format:"Variance = %.3f", result);
        break;
    case 9:
        System.out.print(s:"Enter first number: ");
        int n1 = reader.nextInt();
        System.out.print(s:"Enter second number: ");
        int n2 = reader.nextInt();
        for(int h = 1; h <= n1 && h <= n2; ++h)
        {
            if(n1 % h==0 && n2 % h==0)
                gcd = h;
        }
        System.out.printf(format:"G.C.D of %d and %d is %d", n1,
                n2, gcd);
        break;
    default:
        System.out.printf(format:"Wrong choice");
        return;
}
```

```
calculator }
Menu:
1)add
2)sub
3)mul
4)div
5)sqrt
6)power
7)mean
8)variance
9)GCD
Enter choice: 3
Enter first number: 1
Enter second number: 2
1.0 * 2.0 = 2.0
PS C:\Users\lenovo\Desktop\Sem 4\Java assignments\Lab1>
```