1.

```java
public class ArmstrongNumber {public static void main(String[] args) {

    int num = 153, original, a , output = 0;

    original = num;

    while (original != 0)
    {
        a = original % 10;

        output += Math.pow(a, 3);

        original /= 10;
    }

    if(output == num){
        System.out.println(num + " is an Armstrong number");
    }
    else{
        System.out.println(num + " is not an Armstrong number");
    }
}

}
```

2.

```java
public class ArmstrongNumber
{
    public static void main(String[] args)
     {
        int n, count = 0, a, b, c, sum = 0;
        System.out.print("Armstrong numbers from 100 to 999: \n");
        for(int i = 100; i <= 999; i++)
        {
            n = i;
            while(n > 0)
            {
                b = n % 10;
                sum = sum + (b * b * b);
                n = n / 10;
            }
            if(sum == i)
            {
                System.out.print(i+" ");
            }
            sum = 0;
        }
    }
}
```

3.

```
 public class SimpleInterest
{
    public static void main(String[] args)
     {
        double P = 1000, R = 5, T=3, Si, Ci;

        Si = (P*R*T)/100;
        System.out.println("The Simple Interest is:" +Si);

        Ci = P*(Math.pow((1+R/100),T));
        System.out.println("The Compound Interest is:" +Ci);

     }
}
```

Output:

```
The Simple Interest is:150.0
The Compound Interest is:1157.6250000000002
```

4.

```
public class Marks
{
    public static void main(String[] args)
     {
    int Maths = 90, Eng = 85, Sci = 55;
    if(Maths > 60 && Eng > 60 && Sci>60)
    {
       System.out.println("Passed");


    }

    else if(Maths>60 || Eng > 60 && Eng>60||Sci>60 && Maths>60||Sci>60)
    {
       System.out.println("Promoted");

    }
    else
    {
       System.out.println("Fail");
    }
     }
}
```

Output: Promoted

5.

```
    import java.util.Scanner;

public class TaxAmt
{
    public static void main(String[] args)
     {
```

```
        Scanner sc = new Scanner (System.in);
        System.out.println("Enter Your Amount");
         double tax = 0;
         int income =      sc.nextInt();

         if(income<=180000)
              tax=0;
              else if (income<=300000)
             tax=0.1*(income-18000);
             else if (income<=500000)
              tax=0.2*(income-300000)+12000;
             else if (income<=1000000)
              tax=0.3*(income-500000)+52000;



         System.out.println(tax);

         }
}
```

Output:

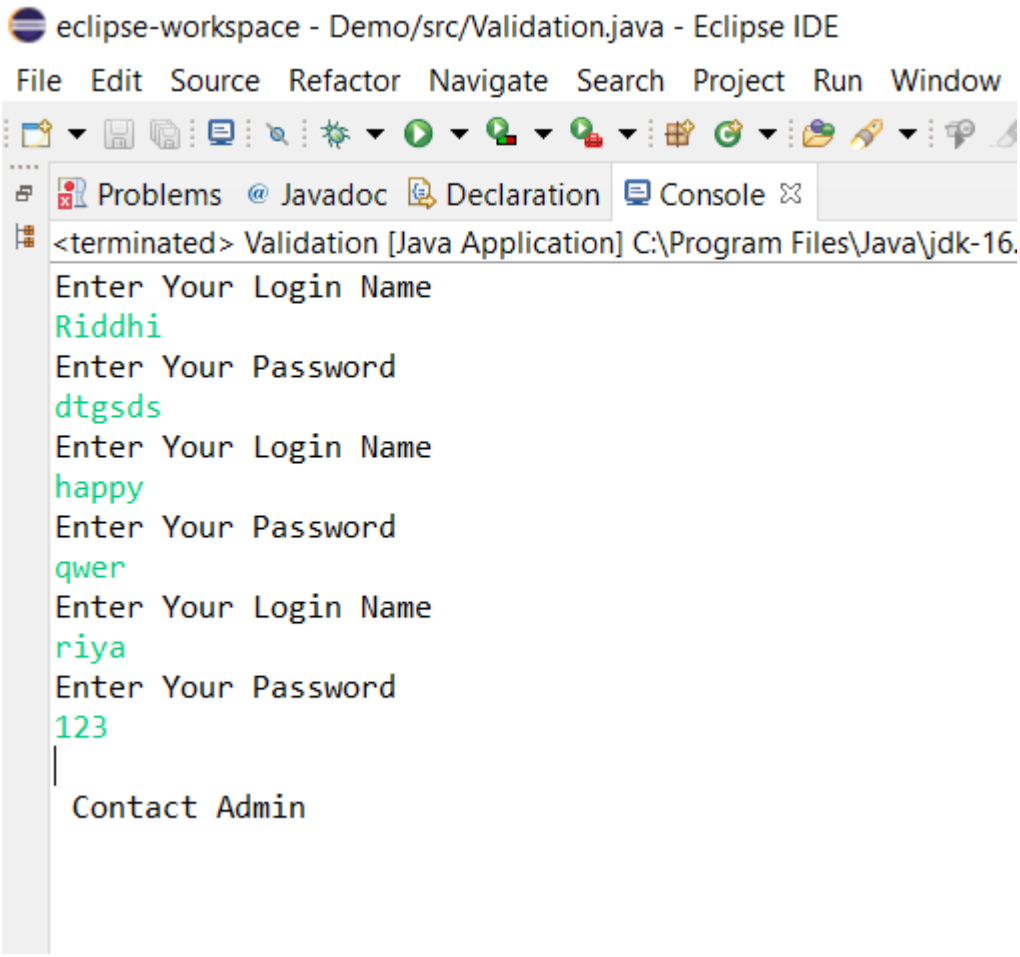
```
Enter Your Amount
400000
32000.0
```

```java

import java.util.Scanner;
public class Validation {
    public static void main(String[] args) {

    int num = 0;

    while(num < 3)
    {
    String username = "riddhi";
        String pass = "abcd";
        Scanner sc = new Scanner(System.in);

        System.out.println("Enter Your Login Name");
        String name = sc.nextLine();
        System.out.println("Enter Your Password");
        String password = sc.nextLine();
        if(name.equals(username) && password.equals(pass))
        {

        System.out.println("Welcome " +username + "\n");
        break;
        }

        else
        {
        num = num+1;
        }

    }
   if(num == 3)
System.out.print("\n Contact Admin");
```

Problems @ Javadoc Declaration Console

<terminated> Validation [Java Application] C:\Program Files\Java\jdk-16.0.2\bin\javaw.exe (04-Aug-2021

```
Enter Your Login Name
riddhi
Enter Your Password
abcd
Welcome riddhi
```




7.

```
public class Search
{
    public static void main(String[] args)
     {

     int arr[]= {5,12,14,6,78,19,1,23,26,35,37,7,52,86,47};
     int value = 19;

 for(int i : arr)
 {
       if (i==value)

       {
             System.out.print("number found:"  +i);
             break;
       }

 }
```

```
        }
}
```

```
Output: number found:19
```

8

```
public class BubbleSort {
    static void bubbleSort(int[] arr) {
        int n = arr.length;
        int temp = 0;
         for(int i=0; i < n; i++){
                 for(int j=1; j < (n-i); j++){
                          if(arr[j-1] > arr[j]){
                                 //swap elements
                                 temp = arr[j-1];
                                 arr[j-1] = arr[j];
                                 arr[j] = temp;
                          }

                 }
         }

    }
    public static void main(String[] args) {
                int arr[] ={5,12,14,6,78,19,1,23,26,35,37,7,52,86,47};

                System.out.println("Array Before Bubble Sort");
                for(int i=0; i < arr.length; i++){
                        System.out.print(arr[i] + " ");
                }
                System.out.println();

                bubbleSort(arr);//sorting array elements using bubble sort

                System.out.println("Array After Bubble Sort");
                for(int i=0; i < arr.length; i++){
                        System.out.print(arr[i] + " ");


         }
```

```
Array Before Bubble Sort
5 12 14 6 78 19 1 23 26 35 37 7 52 86 47
Array After Bubble Sort
1 5 6 7 12 14 19 23 26 35 37 47 52 78 86
```

9.

```
public class AvgMarks{

	public static void main(String[] args) {
		int[][] marks=new int[3][3];
		int sum=0;
		double avg=0;
		Scanner val=new Scanner(System.in);
		System.out.println("enter the marks");
		for(int i=0;i<marks.length;i++)
		{
			for(int j=0;j<marks[i].length;j++)
			{
				marks[i][j]=val.nextInt();
				sum=sum+marks[i][j];
			}
		}
		avg=sum/9;
		System.out.println("sum of all subjects is "+sum+" and average is
"+avg );
		for(int i=0;i<marks.length;i++)
		{
			sum=0;
			avg=0;
			for(int j=0;j<marks[i].length;j++)
			{

				sum=sum+marks[j][i];
			}
			System.out.println("sum of marks of "+(i+1)+" subject is
"+sum);
			avg=sum/(marks[i].length);
			System.out.println("average of marks of "+(i+1)+" subject is
"+avg);
		}

	}

}
```

```
enter the marks

60
40
20
50
20
80
75
65
55
sum of all subjects is 465 and average is 51.0
sum of marks of 1 subject is 185
average of marks of 1 subject is 61.0
sum of marks of 2 subject is 125
average of marks of 2 subject is 41.0
```

```
sum of marks of 3 subject is 155
average of marks of 3 subject is 51.0
```

6.
```java
import java.util.Scanner;
public class Validation {
    public static void main(String[] args) {

    int num = 0;

    while(num < 3)
    {
    String username = "riddhi";
        String pass = "abcd";
        Scanner sc = new Scanner(System.in);

        System.out.println("Enter Your Login Name");
        String name = sc.nextLine();
        System.out.println("Enter Your Password");
        String password = sc.nextLine();
        if(name.equals(username) && password.equals(pass))
        {

        System.out.println("Welcome " +username + "\n");
        break;
        }

        else
        {
        num = num+1;
        }

    }
   if(num == 3)
System.out.print("\n Contact Admin");
        }
}
```