

جس اور جس دن قیامت برپا ہوگی گنہگار نا امید ہو جائیں گے۔ - الروم آیت ۱۲

There are no secrets to success. It is the result of preparation, hard work, and learning from failure.
Colin Powel

Solution Homework 06

[Loop, Nested Loop]

Note: It is assumed that all tasks should be solved using loop.

Task 1:

Write a program to calculate sum of first ten positive numbers. In output show numbers separated by + sign and finally show = sign and sum:

1+2+3+4+5+6+7+8+9+10=55 [Hint: Use \b to erase last + sign]

```
System.out.print("Enter number:");
n=in.nextInt();
i=1;
sum=0;
while (i<=n){
    System.out.print(i+"");
    sum=sum+i;
    i=i+1;
}
System.out.println("\b="+sum);
```

Task 2:

Write a program to show numbers 1 to 2 with an increment of 0.1, use DecimalFormat to show output like?

1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0

```
double d;
DecimalFormat df=new DecimalFormat("#.0");
for (d=1;d<2.1;d=d+0.1)
    System.out.print(df.format(d)+" ");
```

Task 3:

Write a program to input a sentence and display position of spaces in sentence like:

Space 1 at position: 4

Space 2 at position: 11

...

```
System.out.print("Enter any sentence:");
String s=in.nextLine();
for (i=0, j=0;i<s.length();i++)
    if (s.charAt(i)==' '){
        j++;
        System.out.println("Space "+j+" at position:"+(i+1));
    }
```

Task 4:

Write a program to calculate factorial of any number. Show output like if number is 5 print:

5 * 4 * 3 * 2 * 1 = 120 [Hint: use \b to erase last *]

```
System.out.print("Enter number:");
n=in.nextInt();
int f=1;
while (n>0){
    System.out.print(n+"*");
    f=f*n;
    n=n-1;
}
System.out.println("\b="+f);
```

Task 5:

Write a program to input numbers from user and print their sum. Say user to enter any positive number and enter -1 to terminate. Inside loop write print statement and input statement. Check if input is -1 terminate loop otherwise calculate count and sum and show output like:

```
Enter Positive Number or -1 to quit: 12
Enter Positive Number or -1 to quit: 13
Enter Positive Number or -1 to quit: 2
Enter Positive Number or -1 to quit: -1
You entered 3 numbers Sum is : 27
```

```
sum=0; count=0;
do{
    System.out.print("Enter Positive Number or -1 to quit:");
    n=in.nextInt();
    if (n!=-1){
        sum=sum+n;
        count++;
    }
}while (n!=-1);
System.out.println("You enter "+count+" numbers Sum is:"+sum);
```

Task 6:

Write a program to show output as given on right hand side. Use nested loop

```
1
2 1
3 2 1
4 3 2 1
5 4 3 2 1
```

```
for (i=1;i<=5;i++){
    for (j=i;j>=1;j--){
        System.out.print(j+" ");
    }
    System.out.println();
}
```

Task 7:

Write a program to show output as given on right hand side. Use nested loop

```
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
```

```
for (i=1;i<=5;i++){  
    for (j=i;j>=1;j--)  
        System.out.print(i+" ");  
    System.out.println();  
}
```

Task 8:

Write a program to calculate factorial of 3 to 6 using nested loop. Show output like

3!=6

4!=24

5!=120

6!=720

```
for (n=3;n<=6;n++){  
    f=1;  
    for (j=n;j>=1;j--)  
        f=f*j;  
    System.out.println(n+"!="+f);  
}
```

----- BEST of LUCK -----