1.FIBONACCI

```
package task1;
import java.util.Scanner;
public class Fibonacci {
        public static void fibonacci() {
    Scanner reader = new Scanner(System.in);
        System.out.println("Enter a number:");
        int number = reader.nextInt();
System.out.println("Fibonacci Series till " + number + " terms :");
        int firstTerm =0,secondTerm =1;
        for(int i=1;i<=number;++i) {
        System.out.println(firstTerm);
       int nextTerm =firstTerm + secondTerm;
       firstTerm = secondTerm;
       secondTerm=nextTerm;
       }
       }
       public static void main(String[] args) {
          Fibonacci.fibonacci();
       }
       }
```

Output:

```
Enter a number:
8
Fibonacci Series till 8 terms :
0
1
1
2
3
5
8
13
```

2.FACTORIAL

```
package task1;
import java.util.Scanner;
public class Factorial {
public  void fact() {
                Scanner read = new Scanner(System.in);
                System.out.println("Enter a Factorial number:");
                int number = read.nextInt();
                int factorial = 1;
                for(int i=1;i<=number;i++) {
                        factorial*=i;
                        System.out.println(number +"!" +"="+factorial);
                }
                }
public static void main(String[] args) {
   Factorial f = new Factorial();
       f.fact();
}
}
```

Output:

```
Enter a Factorial number:
4
4!=24
```

3.REVERSE LOOP

```
package task1;
import java.util.Scanner;
public class Reverse {
public static void main(String[] args) {
            Scanner s = new Scanner(System.in);
            System.out.println("Enter a number:");
            int n =s.nextInt();
            for(int i=n;i>=0;i--) {
```

```
            System.out.println(i);
        }
        }
}
```

Output:

```
Enter a number:
10
10
9
8
7
6
5
4
3
2
1
0
```

4.HALLOW

```
package task1;
import java.util.Scanner;
public class Hallow {
    public static void main(String[] args) {
        Scanner read = new Scanner(System.in);
            System.out.println("Enter a number:");
            int n=read.nextInt();
            for (int i = 1; i <=n; i++) {
            for (int j = i; j < n; j++) {
            System.out.print(" ");
            }
```

```
for (int k = 1; k <= (2 * i - 1); k++) {
 if (k == 1 || i == n || k == (2 * i - 1)) {
System.out.print("*");}
else {
System.out.print(" ");
}
}
System.out.println("");
}
}
}
```

Output:

```
Enter a number:
5

   *
  * *
 *   *
*     *
*********
```

5.GUESSING GAME

```
package task1;

import java.util.Scanner;

import java.util.Random;

public class Guess1 {

        static {

                System.out.println("Welcome to the Guessing Game!");

        }

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

```
                Scanner scanner = new Scanner(System.in);
                int target =20;
                int guess;
                int count = 0;
                 do {
               System.out.print("Enter an integer between 1 to 100: ");
                    guess = scanner.nextInt();
                    count++;
                   if (guess > 21) {
 System.out.println("Your guess is higher than the number.");
                       System.out.println("Guess again!");
                    } else if (guess < 19) {
System.out.println("Your guess is lower than the number.");
                       System.out.println("Guess again!");
                    } else {
        System.out.println("You guessed the correct number.");
                       System.out.println("You win the game....");
                 System.out.println("It took you " + count + " tries.");
                    }
                } while (guess != target);
 }
}
```

Output:

Welcome to the Guessing Game!
Enter an integer between 1 to 100: 56
Your guess is higher than the number.
Guess again!
Enter an integer between 1 to 100: 12
Your guess is lower than the number.
Guess again!
Enter an integer between 1 to 100: 20
You guessed the correct number.
You win the game....
It took you 3 tries.