1.Hallow square

```
public class Main
{
        public static void main(String[] args) {
        int n=5;
for(int i=1;i<=n;i++)
{
  for(int j=1;j<=n;j++)
  {
  if(i==1||j==1||i==n||j==n)
  System.out.print("*"+" ");
  else
  System.out.print("    ");
  }
  System.out.println();
}
        }
}
```

output:

```
java -cp /tmp/euZCuw2xVY/Main
* * * * *
*       *
*       *
*       *
* * * * *

=== Code Execution Successful ===
```

2.square and cube

```
class HelloWorld {
	public static void main(String[] args) {
		float n=0.6f;
System.out.print("square: "+(n*n));
System.out.print("cube: "+(n*n*n));


	}
}
```

output:

```
java -cp /tmp/jjOIumZtcf/HelloWorld
square: 0.36cube: 0.21600002
=== Code Execution Successful ===
```

3.frequency of elements in the given array

```
import java.util.Arrays;
public class ak {
	public static void main(String[] args) {
				int a[] = new int[] {1, 2, 8, 3, 2, 2, 2, 5, 1};
				int t[] = new int[a.length];
		int visited = -1;
		for (int i = 0; i < a.length; i++) {
			int count = 1;
			if (t[i] == visited) {
				continue;
			}
```

```
                for (int j = i + 1; j < a.length; j++) {
                    if (a[i] == a[j]) {
                        count++;
                        t[j] = visited;
                    }
                }
                t[i] = count;
            }
            for (int i = 0; i < a.length; i++) {
                if (t[i] != visited) {
                    System.out.println(a[i] + " ->->-> " + t[i]);
                }
            }
        }
}
```

output:

```
java -cp /tmp/FIOb9mPYqd/ak
1 ->->-> 2
2 ->->-> 4
8 ->->-> 1
3 ->->-> 1
5 ->->-> 1

=== Code Execution Successful ===
```

4.perfect

```
class perfect{
    public static void main(String[] args) {
        int n=28;
```

```
        int sum=0;
        for(int i=1;i<n;i++){
            if(n%i==0){
                sum=sum+i;
            }
        }
        if(n==sum){
            System.out.print("perfect number");
        }
        else{
            System.out.print(" not perfect number");
        }
    }
}
```

output:

```
java -cp /tmp/R8L2GSMaQM/perfect
perfect number
=== Code Execution Successful ===
```

5.Fibonacci series

```
class fib{
    public static void main(String[] args) {
        int n=6;
        int a=0;
        int b=1;
        for(int i=0;i<=n;i++){
            System.out.print(a+" ");
```

```
            int c=a+b;
            a=b;
            b=c;
        }
    }
}
```

output:

```
java -cp /tmp/OQNFdP6a9j/fib
0 1 1 2 3 5 8
=== Code Execution Successful ===
```

6. factorial

```
class fact{
    public static void main(String[] args) {
        int n=5;
        int fact=1;
        for(int i=1;i<=n;i++){
            fact=fact*i;
        }
        System.out.print(fact);
    }
}
```

output:

```
java -cp /tmp/ZAeTcVgRak/fact
120
=== Code Execution Successful ===
```