Eg 1: functions of x

$$f(x) = \begin{cases} 2x; & 0 \le x \le 100 \\ 0; & \text{otherwise} \end{cases}$$

$$g(x) = \begin{cases} x^2; & 0 \le x \le 100 \\ 0; & \text{otherwise} \end{cases}$$

WAP; Simulate the functions

Test | output:

input: 50 (or) x: 0

f(x): 100 g(x): 0

g(x): 2500

import java.util.*;

Scanner()

BufferedReader() ⇒ Scanner sc = new Scanner(System.in)

import java.io.*;

2 f x, fx, gx

Soln

```
import java.io.*;
public class functionsofx
{
    public static void main(String[] args) throws IOException
    {
        double x, fx, gx;
        BufferedReader br = new BufferedReader(
                            new InputStreamReader(System.in));
        System.out.println("Enter a no:");
        x = Double.parseDouble(br.readLine());
        if (x >= 0 && x <= 100)
        {
            fx = 2*x;
            gx = x*x;
        }
        else
        {
            fx = 0;
            gx = 0;
        }
        System.out.println("f(x) = " + fx);
        System.out.println("g(x) = " + gx);
    }
}
```

Scanner class

0 ≤ x ≤ 100