

slip19

```
class s19q1 {  
  
    public static void main(String[] args) {  
  
        int n = 10;  
  
        System.out.println("Fibonacci series up to " + n + " terms:");  
  
        Fib(n);  
  
    }  
  
  
    public static void Fib(int n) {  
  
        int t1 = 0, t2 = 1;  
  
        System.out.print("0 1 ");  
  
  
        for (int i = 2; i < n; i++) {  
  
            int sum = t1 + t2;  
  
            System.out.print(sum + " ");  
  
            t1 = t2;  
  
            t2 = sum;  
  
        }  
  
    }  
  
}
```

```
import java.applet.Applet;  
  
import java.awt.Graphics;  
  
import java.awt.event.KeyEvent;
```

```
import java.awt.event.KeyListener;
```

```
import java.awt.event.MouseEvent;
```

```
import java.awt.event.MouseMotionListener;
```

```
public class CursorPositionApplet extends Applet implements MouseMotionListener,  
KeyListener {
```

```
    private int mouseX = 0;
```

```
    private int mouseY = 0;
```

```
    @Override
```

```
    public void init() {
```

```
        addMouseMotionListener(this);
```

```
        addKeyListener(this);
```

```
    }
```

```
    @Override
```

```
    public void paint(Graphics g) {
```

```
        g.drawString("X: " + mouseX + ", Y: " + mouseY, 10, 20);
```

```
    }
```

```
    @Override
```

```
    public void mouseDragged(MouseEvent e) {
```

```
        mouseX = e.getX();
```

```
        mouseY = e.getY();
```

```
        repaint();
```

```
    }
```

@Override

```
public void mouseMoved(MouseEvent e) {  
    mouseX = e.getX();  
    mouseY = e.getY();  
    repaint();  
}
```

@Override

```
public void keyPressed(KeyEvent e) {  
    // Handle keyboard events if needed  
}
```

@Override

```
public void keyReleased(KeyEvent e) {  
    // Handle keyboard events if needed  
}
```

@Override

```
public void keyTyped(KeyEvent e) {  
    // Handle keyboard events if needed  
}  
}
```

import tkinter as tk

from tkinter import messagebox

```
def show_multiplication_table():

    try:

        num = int(number_entry.get())

        table = ""

        for i in range(1, 11):

            table += f"{num} x {i} = {num * i}\n"

        result_text.delete(1.0, tk.END)

        result_text.insert(tk.END, table)

    except ValueError:

        messagebox.showerror("Invalid Input", "Please enter a valid integer.")

window = tk.Tk()

window.title("Multiplication Table")

number_label = tk.Label(window, text="Enter a number:")

number_label.pack(pady=5)

number_entry = tk.Entry(window)

number_entry.pack(pady=5)

calculate_button = tk.Button(window, text="Show Multiplication Table",
command=show_multiplication_table)

calculate_button.pack(pady=10)
```

```
result_text = tk.Text(window, width=30, height=12)
```

```
result_text.pack(pady=5)
```

```
window.mainloop()
```

```
import math
```

```
class Shape:
```

```
    def area(self):
```

```
        raise NotImplementedError("This method should be overridden in subclasses")
```

```
    def volume(self):
```

```
        raise NotImplementedError("This method should be overridden in subclasses")
```

```
class Square(Shape):
```

```
    def __init__(self, length):
```

```
        self.length = length
```

```
    def area(self):
```

```
        return self.length ** 2
```

```
    def volume(self):
```

```
        return self.length ** 3
```

```
class Circle(Shape):
```

```
    def __init__(self, radius):
```

```
self.radius = radius
```

```
def area(self):
```

```
    return math.pi * (self.radius ** 2)
```

```
def volume(self):
```

```
    return (4/3) * math.pi * (self.radius ** 3)
```

```
square = Square(5)
```

```
circle = Circle(3)
```

```
print(f"Square with length 5: Area = {square.area()}, Volume = {square.volume()}")
```

```
print(f"Circle with radius 3: Area = {circle.area():.2f}, Volume = {circle.volume():.2f}")
```