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# **Event-driven programming**

## **COMP 102**

**Victoria University of Wellington**

# GUI's and Event driven input

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- In a GUI, the interaction is controlled by the user, not by the program
- User initiates "events"
  - buttons
  - menus
  - mouse press/release/drag
  - text fields
  - sliders
  - keys
- Program responds

# Buttons using the ecs100 library

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```
public class MyClass {
    public void setupGUI(){
        UI.addButton("Clear", UI::clearGraphics);
        UI.addButton("Go", this::runFireworks);
        UI.addButton("Quit", UI::quit);
    }

    public void runFireworks(){
        .....
    }

    public static void main(String[ ] args){
        MyClass mc = new MyClass();           or      new MyClass().setupGUI();
        mc.setupGUI();
    }
}
```

# More kinds of events.

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- Buttons
- Text fields
- Menus
- Mouse press/release/drag
- Sliders
- Keys
- .....
- How does Java respond to events etc?
  - When event occurs (button pressed / text entered in box / slider changed / mouse clicked/...)
    - Java looks up the object & method attached to the event (the "listener")
    - Calls the method on the object
      - passing any information involved in the event as arguments.