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25/11/17

Outer Listener → The old

```
import java.awt.*;  
import java.awt.event.*;
```

^{listener class}
★ The ~~class~~ where object is registered with source, that ^{listener} class' method executes.

★ We can also create ^{listeners} individual classes for individual buttons but it's would not be efficient so we use "getSource()".

class Outer implements ActionListener

② ~~Event Demo~~

Event Demo

Outer(Event Demo f)

this.f = f;

?

we are
recog using text field non-static DM

of Event demo

so we have to we are

of Event demo
ref. of 'f'
var.

```
public void actionPerformed(ActionEvent e)
```

```
{
```

```
if (e.getSource() == f.b)
```

```
f.tf.setText("lalu");
```

```
if (e.getSource() == f.b1)
```

```
f.tf.setText("rabri");
```

```
}
```

```
}
```

(ii) ~~Eg.~~ In "Event Demo" ~~class~~ ~~main~~ class

^{Ref. of Event Demo}
outer o = new Outer(this);

b1.addActionListener(o); - ①

b.addActionListener(o); - ②

// b1.addActionListener(this); - ③

★ Here when we use ① we get o/p "rabri" but when we use ② we get o/p → "cancel" becoz in ① we are passing ref of outer listener class's object & in ② we are passing 'this' which contains ref of ~~Inner~~ "Event Demo".

Inner Listener

In "Event Desc" class

b. addActionListener(this);

b 1. addActionListener(new ActionListener())

```
public void actionPerformed(ActionEvent e)
```

```
{
```

```
    tf.setText("Inner listener");
```

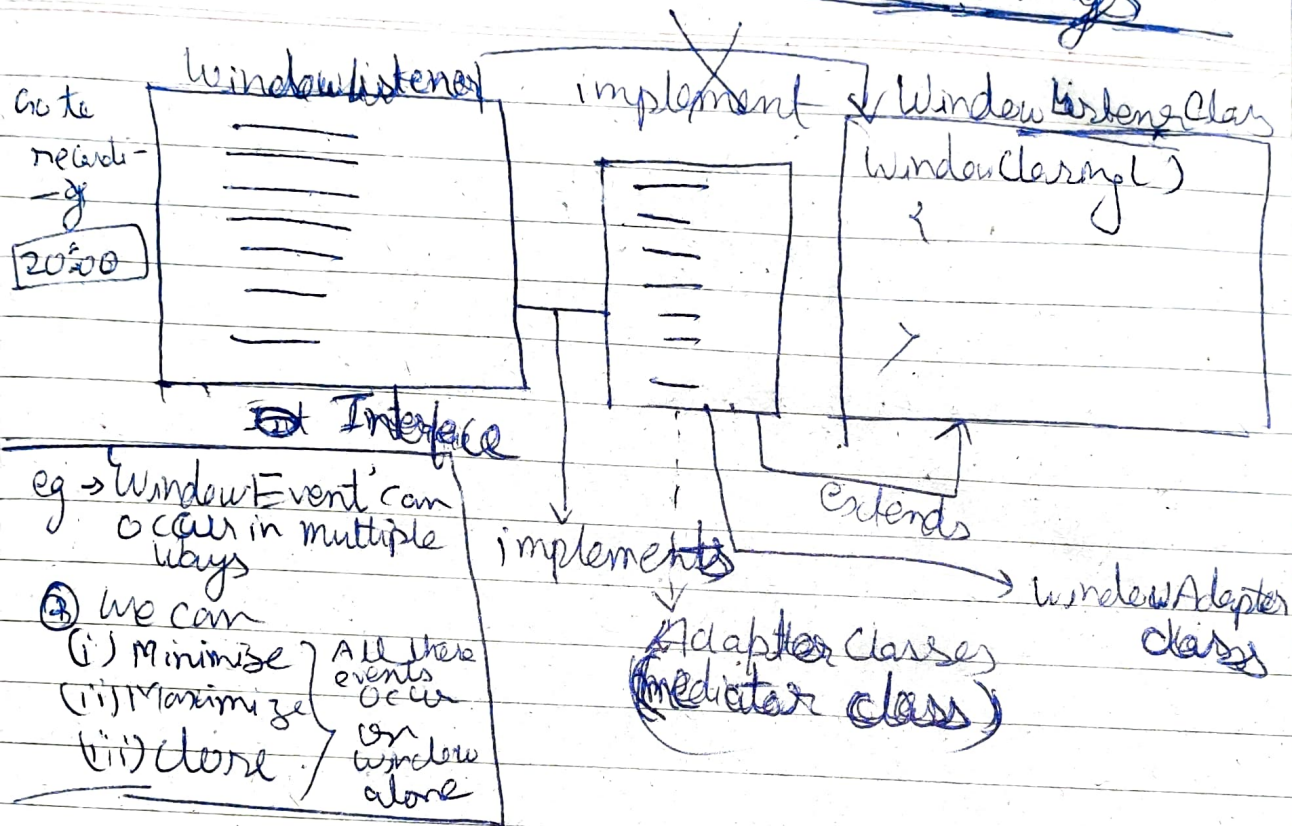
```
}
```

```
}
```

Inner
listener
class
↓
this
are
Anony-
mous
class

★ Since, the ref. of inner class is passed only to one method so no need of "if" to check reference where reference we are getting.

Events that can occur in > 1 ways



Event Trapping via Adapter classes

~~class WindowEvent Listener~~

class WindowEventListener extends WindowAdapter

```
public void windowClosing(WindowEvent e)
```

```
{  
    System.exit(0);  
}
```



```
class MouseEventListener extends  
    MouseAdapter
```

```
{  
    EventDemo t; EventDemo t;
```

```
    MouseEventListener(EventDemo f)  
    {  
        this.t = f;  
    }  
}
```

```
public void mouseClicked(MouseEvent e)  
{  
    t.t.setText("mouse event");  
    t.f.setBackground(Color.RED);  
}
```

```
class KeyEventListener extends  
    KeyAdapter
```

```
{  
    public void keyTyped(KeyEvent e)  
    {  
        Sop(e.getKeyChar());  
    }  
}
```

in 'EventXone Class'

```
f.add(b);  
f.add(b1);  
tf = new TextField();
```

```
tf.addKeyListener(new KeyEventListener());  
tf.setBounds(20, 40,  
100, 40);  
f.add(tf);
```

```
f.addWindowListener(new WindowEvent  
Listener());
```

```
f.addMouseListener(new MouseEvent  
- Listen(this));  
-er
```

```
f.setLayout(null);
```

→ For this click anywhere on tf inside the frame

Assignment: - Take 'name' from user in textfield and as soon as user enters a digit, give "Invalid Entry".