Java Programming (0409)
Swing Cheet Sheet

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1 JFrame

```java
import javax.swing.JFrame;

@SuppressWarnings("serial")
public class MyFrame extends JFrame {
    Container frame = this.getContentPane();
    MyDialog dialog = null;

    MyFrame(String title){
        super(title);
        this.setSize(500, 500);
        this.setDefaultCloseOperation(EXIT_ON_CLOSE);
        this.setLocationRelativeTo(null);
        init();
        this.setVisible(true);
    }

    private void init() {
        JButton button = new JButton("Open Dialog");
        btn.addActionListener(e -> {
            if (dialog == null)
                dialog = new MyDialog(this, "Dialog Title", false);
            else
                dialog.requestFocus();
        });

        frame.add(button);
    }

    public static void main(String[] args) {
        new MyFrame("JFrame Title");
    }

}
```

2 JDialog

```java
import javax.swing.*;
import java.awt.*;
import java.awt.event.WindowAdapter;
import java.awt.event.WindowEvent;
import java.awt.event.WindowListener;

@SuppressWarnings("serial")
public class MyDialog extends JDialog {
    Container dialog = this.getContentPane();
```

```
    MyFrame parent;
    boolean modal;
    MyDialog(MyFrame owner, String title, boolean modal) {
        super(owner, title, modal);
        parent = owner;
        this.modal = modal;
        this.setSize(300, 300);
        this.setDefaultCloseOperation(DISPOSE_ON_CLOSE);
        this.setLocationRelativeTo(null);

        init();
        initWinListener();

        this.setVisible(true);
    }

    private void init() {

    }

    private void initWinListener() {
        this.addWindowListener(new WindowAdapter() {
            @Override
            public void windowClosing(WindowEvent e) {
                super.windowClosing(e);

                if (!modal) {
                    parent.dlg = null;
                }
                dispose();
            }
        });
    }
}

```

3 Wait until JFrame closed in Main Thread

```
public class SomeFrame extends JFrame implements ActionListener {
    public SomeFrame (String title) {
        super(title);

        ...

        synchronized(this){
            try {
                this.wait();
            } catch (InterruptedException e){
                e.printStackTrace();
            }
        }
    }

    // When window closed
    synchronized(this){
        this.notify();
    }

    this.setVisible(false);
```

```
    this.dispose();

}
```

4 Getting events from GUI component

4.1 ActionListener

```
public class _ extends JFrame implements ActionListener {

    ...

    @Override
    public void actionPerformed(ActionEvent e) {
        if (e.getSource() == something) {
            // Do Something...
        }
    }
}
```

4.2 MouseListener (MouseAdapter)

```
something.addMouseListener(new MouseAdapter() {
    @Override
    public void mouseClicked(MouseEvent e) {
        // Do something...
    }

    @Override
    public void mouseEntered(MouseEvent e) {
        // Do something...
    }

    @Override
    public void mouseExited(MouseEvent e) {
        // Do something...
    }

    ...
});
```

5 Delay in JFrame

```
Timer timer = new Timer(TIME_IN_MS, new AbstractAction() {
    @Override
    public void actionPerformed(ActionEvent ae) {
        // Actions after delay
    }
});
timer.setRepeats(false);
timer.start();
```