



What's new in GWT 2.X





JAVA

Agenda

| | |
|----------------|-----------|
| Overview | (5 min.) |
| Concepts | (5 min.) |
| New in GWT 2.X | (15 min.) |
| Demo | (15 min.) |
| Questions | (?) |



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Agenda - Overview

What GWT is (2 min.)

What is GWT good for (3 min.)



JAVA

What GWT is

GWT is a development toolkit for building and optimizing complex browser-based applications.



JAVA

What GWT is

GWT is a development **toolkit** for building and **optimizing** complex **browser-based** applications.



JAVA

What is GWT good for

Java Java Java

Cross-browser compatible

Slim download

Fast execution

Fully Open Source

Community





JAVA

Agenda - Concepts

| | |
|----------------|----------|
| Widgets | (2 min.) |
| Communication | (2 min.) |
| Building stuff | (1 min.) |



JAWA

Widgets

API to build UIs

Components (Tree, DatePicker...)

Panels to layout stuff

Event handling

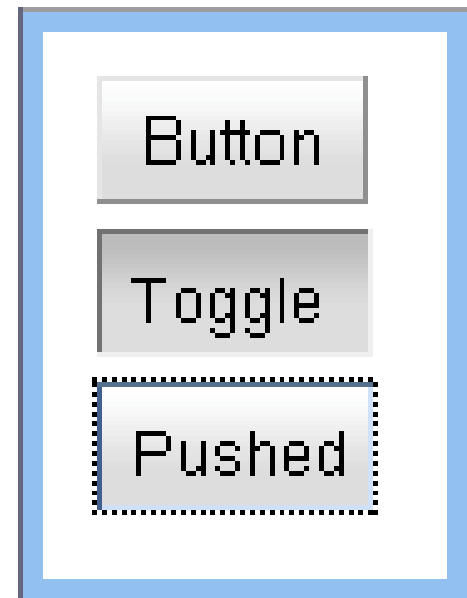
Feels like Swing or SWT

Utilities



Widgets

```
Button button = new Button("Button");  
ToggleButton toggleButton = new ToggleButton("Toggle");  
PushButton pushButton = new PushButton("Push", "Pushed");  
  
VerticalPanel verticalPanel = new VerticalPanel();  
verticalPanel.setSpacing(5);  
verticalPanel.add(button);  
verticalPanel.add(toggleButton);  
verticalPanel.add(pushButton);
```





JAVAX

Client/Server communication

GWT-RPC, RequestBuilder or
RequestFactory

Use GWT-RPC, it hides complexity

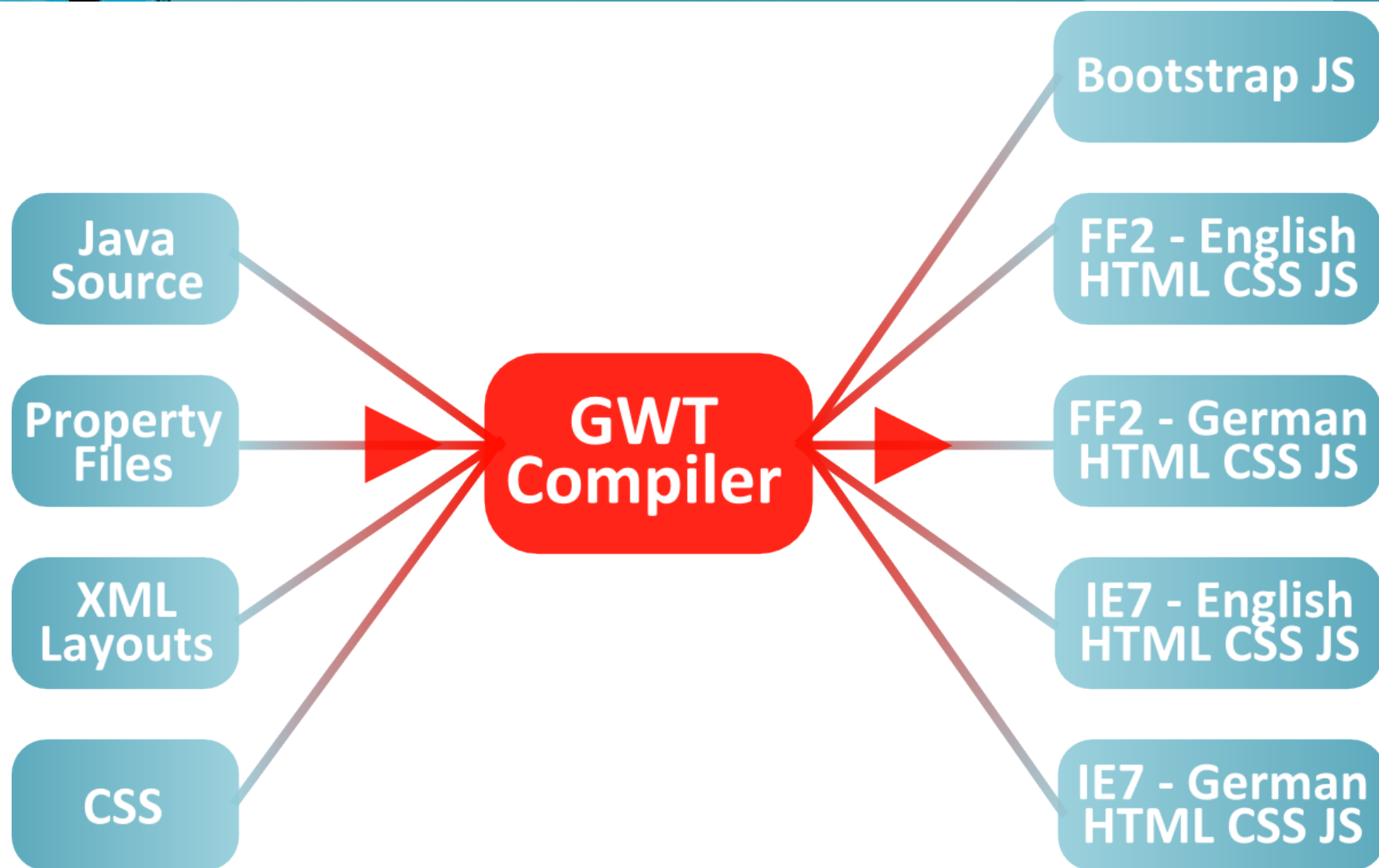
Everything is asynchronous





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Building stuff





JAVAZA

Agenda - New in GWT 2.X

| | |
|---------------------|----------|
| Layout Panels | (2 min.) |
| UiBinder | (2 min.) |
| Cell Widgets | (2 min.) |
| Code Splitting | (2 min.) |
| In-Browser dev mode | (2 min.) |
| Speed Tracer | (2 min.) |
| And more... | (3 min.) |



Layout Panels

Predictable and pixel perfect

Fast and smooth resizing

Works with `<div>` instead of `<table>`

Constraint-based

Works in browser standards mode



JAVA

UiBinder

Readable and simple

Declarative way of building UI's

Separate of view from logic

Connect view and logic using annotation
`@UiField`, `@UiHandler` ...

Better suited for GUI builders



Cell Widgets

Data presentation
widgets

Rendering large data
sets

Scrolling, paging and
sorting

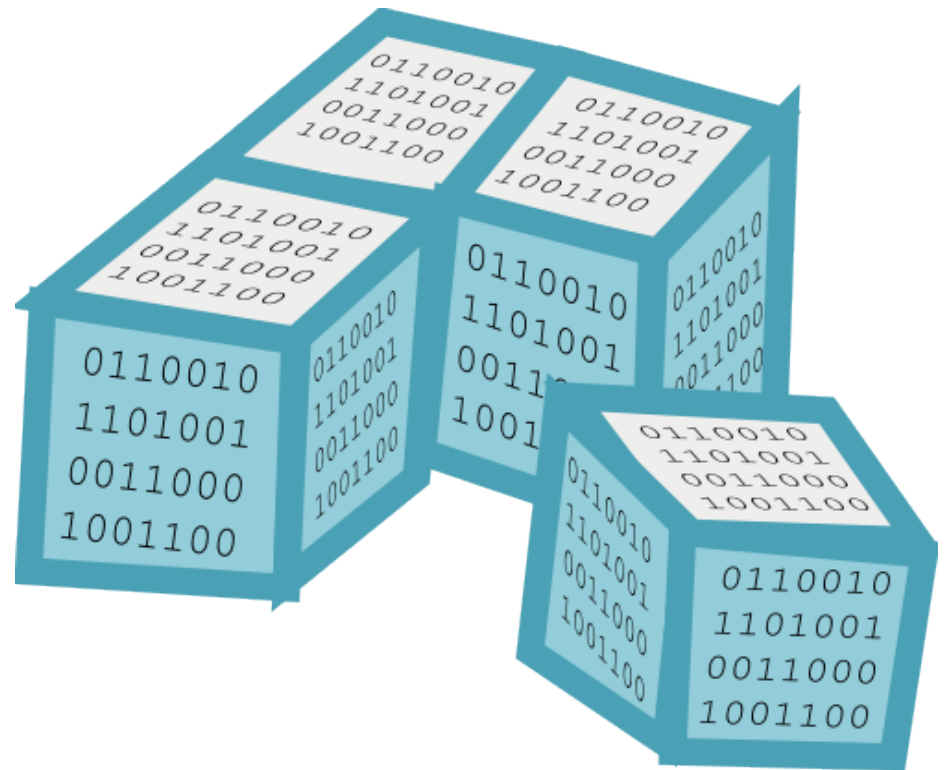
| Name | Street |
|----------------------|------------------------|
| Adriana R. Klein | 1933 Angie Drive |
| Vincent K. Wilkinson | 2542 Johnny Lane |
| Debbie J. Dates | 2666 Cerullo Road |
| Vincent K. Wilkinson | 1933 Angie Drive |
| Adriana R. Klein | 2666 Cerullo Road |
| Michael J. Lusby | 2666 Cerullo Road |
| Michael J. Lusby | 2666 Cerullo Road |
| Adriana R. Klein | 4456 Flinderation Road |
| Vincent K. Wilkinson | 1933 Angie Drive |
| Michael J. Lusby | 2666 Cerullo Road |

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Code Splitting

Complex applications are big
Split points in the code
Finding good split
points is hard





In-Browser dev mode

```
package net.illfounded.calculator.client;  
  
import static com.google.gwt.dom.client.Style.Unit.EM;  
  
public class LPDemo implements EntryPoint {  
  
    public void onModuleLoad() {  
        StackLayoutPanel stackLayoutPanel = new StackLayoutPanel(EM);  
    }  
}
```

Layout Panels Demo - Mozilla Firefox

http://127.0.0.1:8888/index.html?gwt.codesvr=127.0.0.1:9997

Layout Panels Demo

DockPanel

| | | |
|------------------|--------------------|------------------|
| | DockPanel - North | |
| DockPanel - West | DockPanel - Center | DockPanel - East |
| | DockPanel - South | |

DockLayoutPanel

DockPanelExample

CodeSplittingDemo

Fertig

Run Configurations

Create, manage, and run configurations

Run a Web Application

Name: LPDemo

Project: LPDemo

Main class: com.google.gwt.dev.DevMode

Include system libraries when searching for a main class

Include inherited mains when searching for a main class

Stop in main

Apply Revert

Run Close



JAVA

In-Browser dev mode

Embedded Jetty server

Code test and debug in a real browser

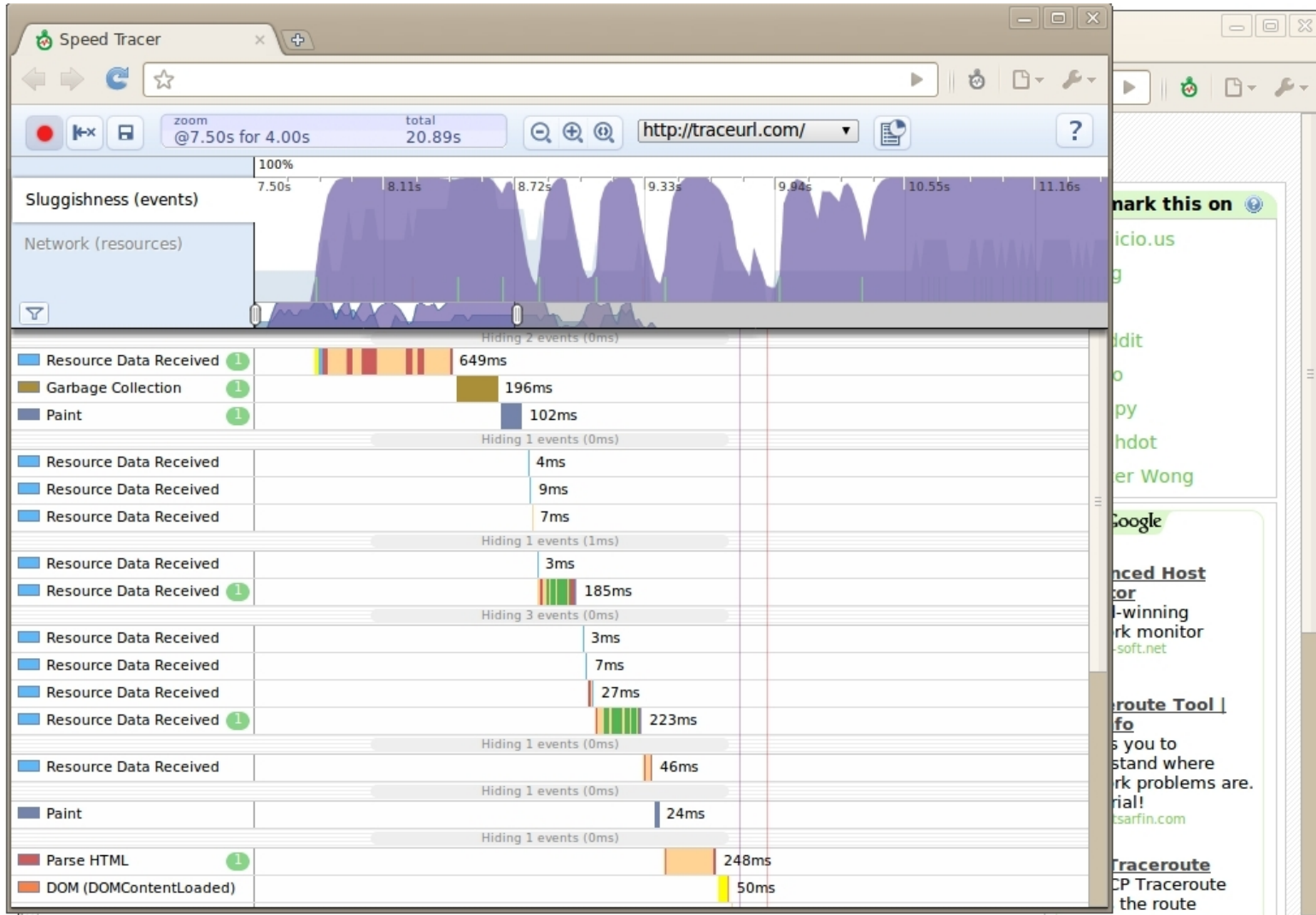
Requires browser plug-in

Works with:





Speed Tracer





JAVA

And more...

New Google Plugin for Eclipse

Compiler optimizations

ClientBundle

Logging

HTML 5 (canvas, audio, video)

Application framework





JAVA

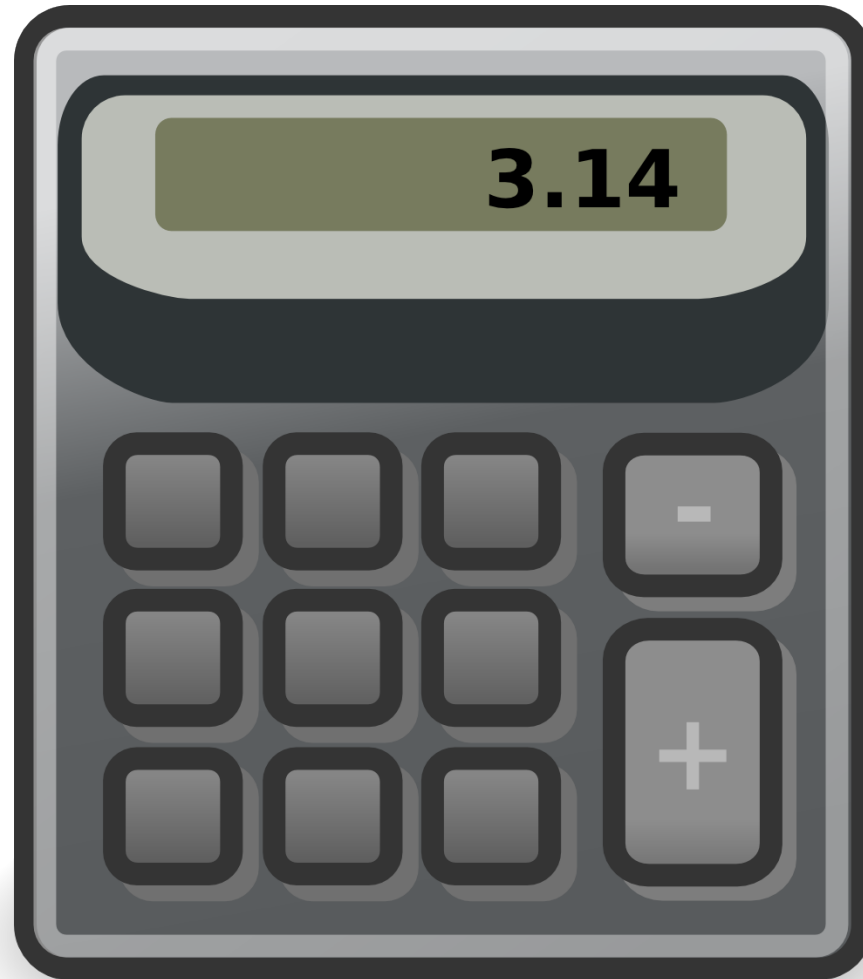
Agenda - Demo

| | |
|----------------------|----------|
| Model View Presenter | (5 min.) |
| Code | (7 min.) |
| Run it | (3 min.) |



AVVA

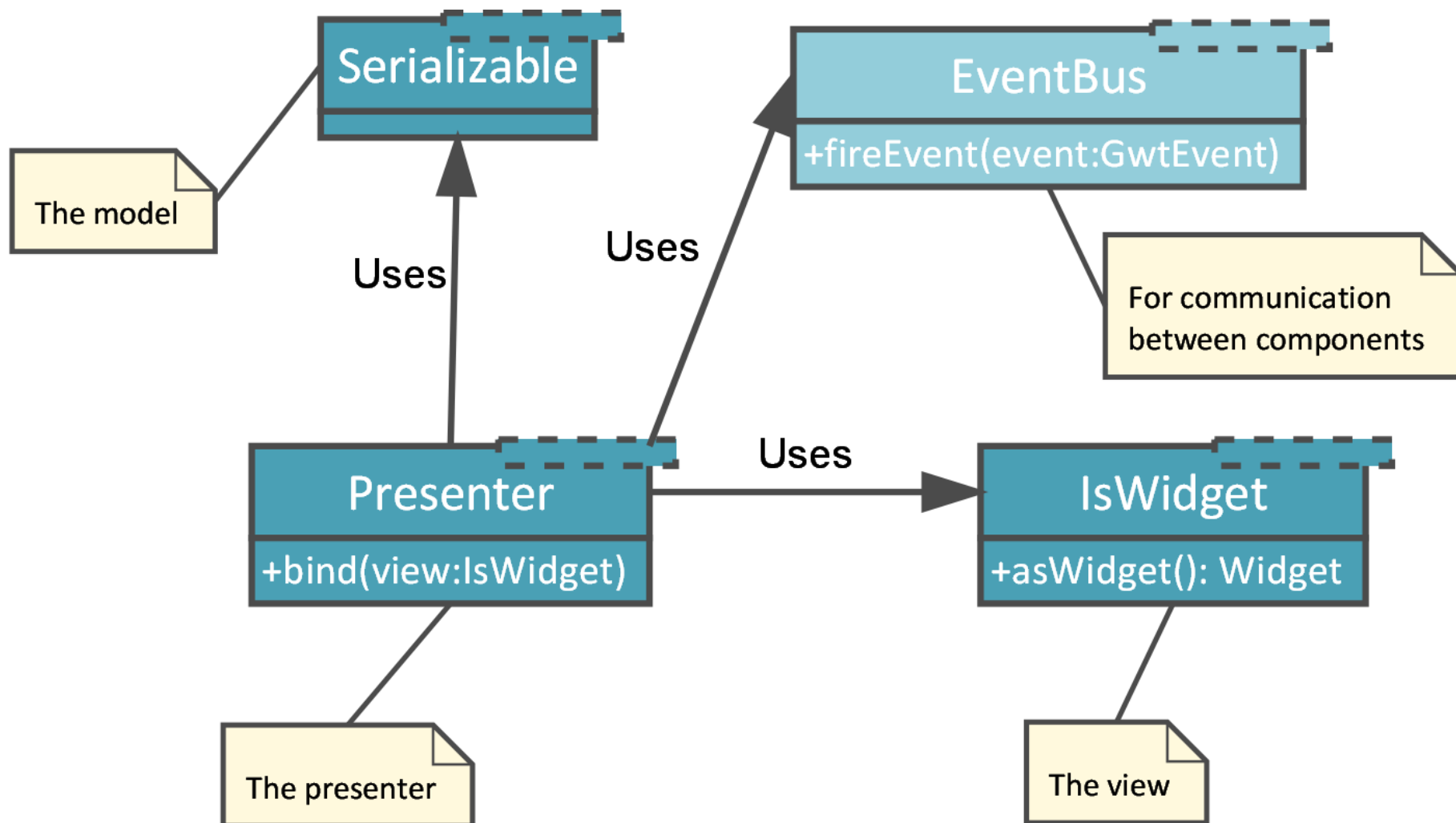
Demo - Calculator





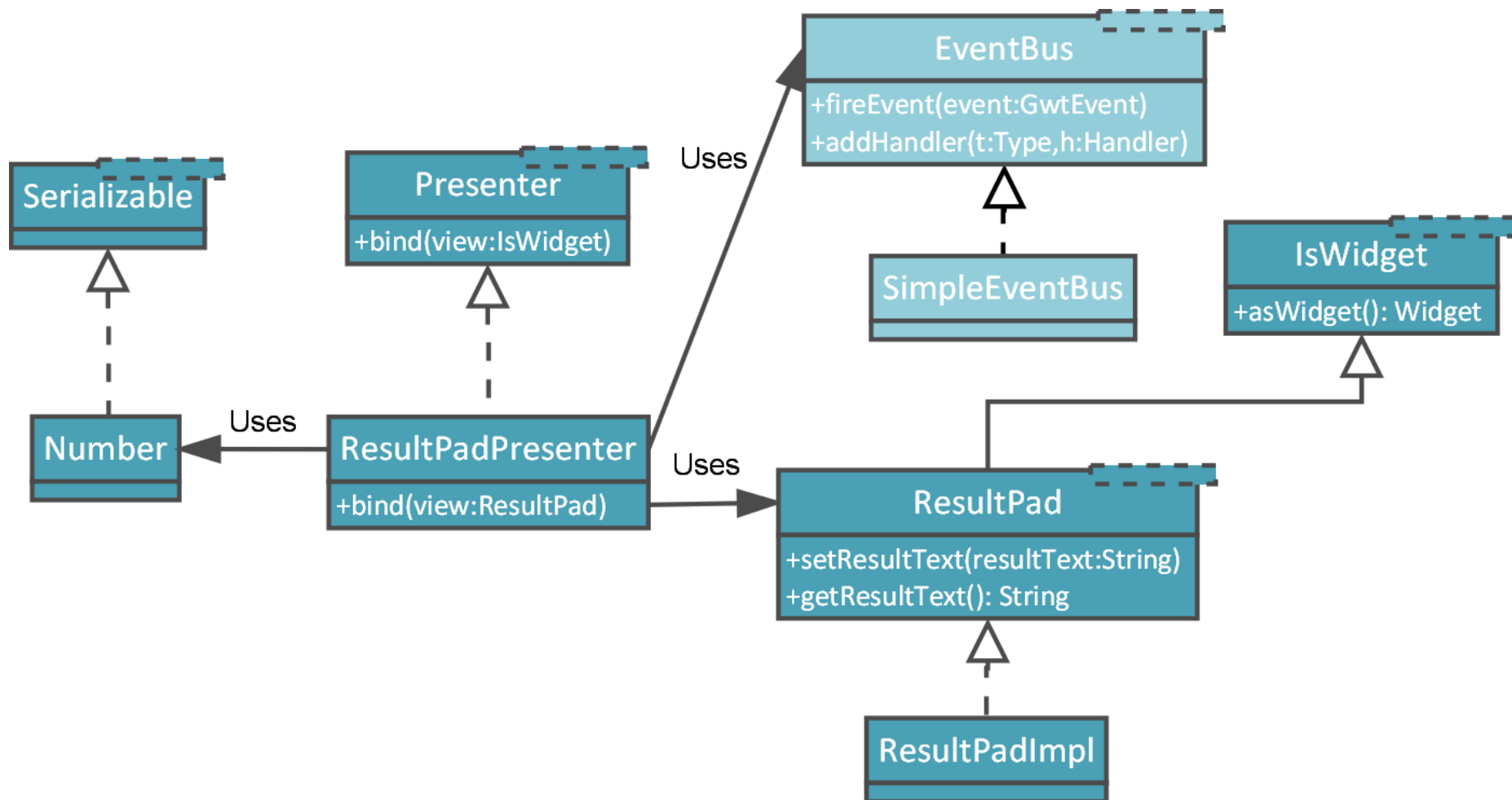
UML

Model View Presenter





Calculator MVP





JAVA

ResultPadPresenter.java

```
public class ResultPadPresenter implements
    Presenter<ResultPad> {

    private EventBus _eventBus;

    public ResultPadPresenter(EventBus eventBus) {
        _eventBus = eventBus;
    }

    @Override
    public void bind(ResultPad view) {
        _eventBus.addHandler(
            CalculatorEventHandler.TYPE,
            new CalculatorEventHandler(view));
    }
}
```



JAVA

CalculatorEventHandler.java

```
public class CalculatorEventHandler implements EventHandler {  
  
    private ResultPad _resultPad;  
  
    public CalculatorEventHandler(ResultPad resultPad) {  
        _resultPad = resultPad;  
    }  
  
    public void onDigitInput(int digit) {  
        String text = _resultPad.getResultText()  
            + digit;  
  
        _resultPad.setResultText(text);  
    }  
}
```



AAAA

ResultPadImpl.ui.xml

```
<!DOCTYPE ui:UiBinder SYSTEM
"http://dl.google.com/gwt/DTD/xhtml.ent">
<ui:UiBinder xmlns:ui="urn:ui:com.google.gwt.uibinder"
xmlns:g="urn:import:com.google.gwt.user.client.ui">

    <ui:style>
        .result {
            font-family: sans-serif;
            ...
        }
    </ui:style>

    <g:Label styleName="{style.result}"
        ui:field="_resultLabel" />

</ui:UiBinder>
```



Java

ResultPadImpl.java

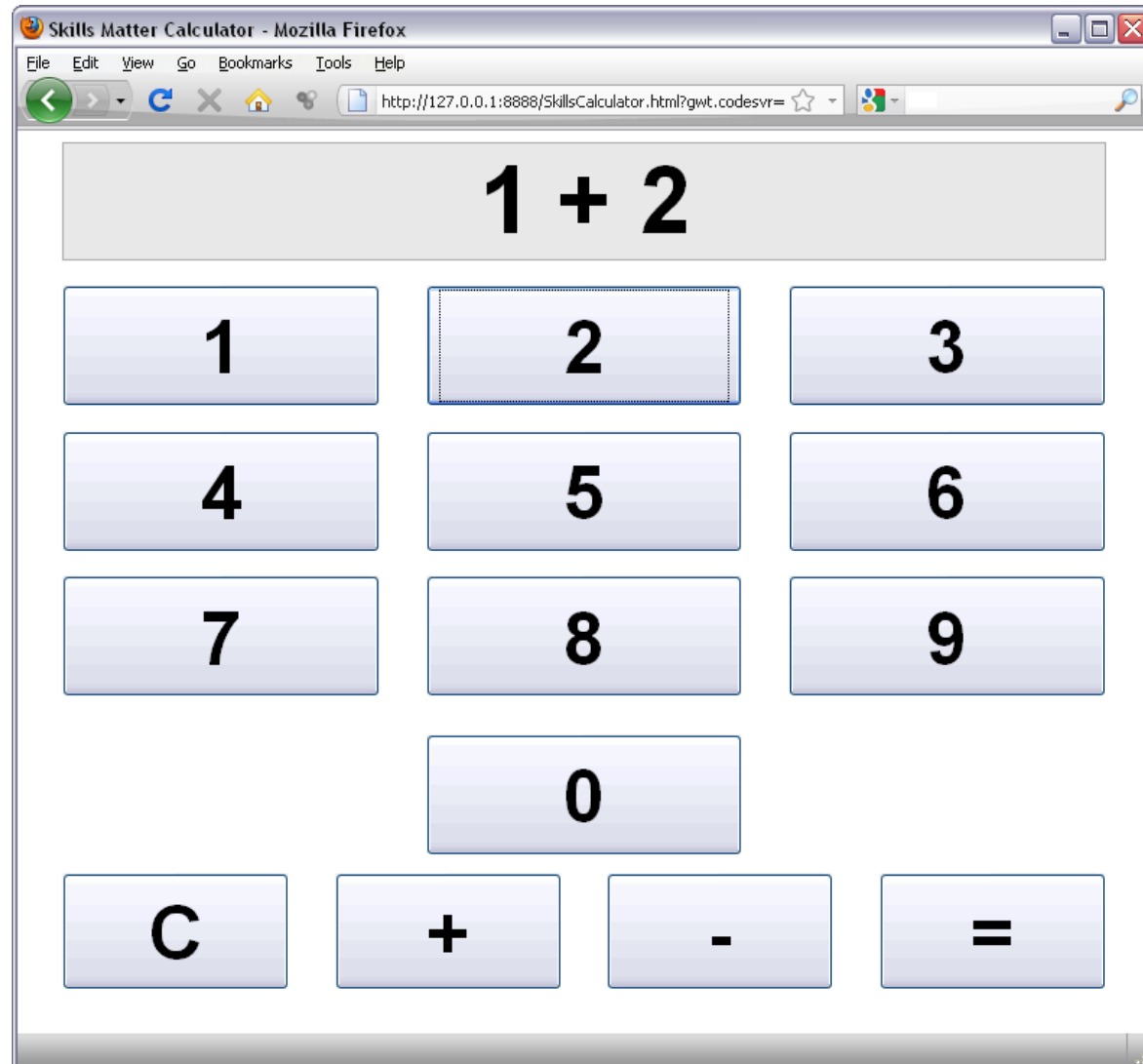
```
public class ResultPadImpl extends Composite
    implements ResultPad {
    ...
    public ResultPadImpl() {
        initWidget(uiBinder.createAndBindUi(this));
    }

    @UiField
    Label _resultLabel;

    @Override
    public void setResultText(String resultText) {
        _resultLabel.setText(resultText);
    }
    ...
}
```



SkillsCalculator





AVVA

Questions?

Best way to get your questions answered?

Ask them!





JAVA

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