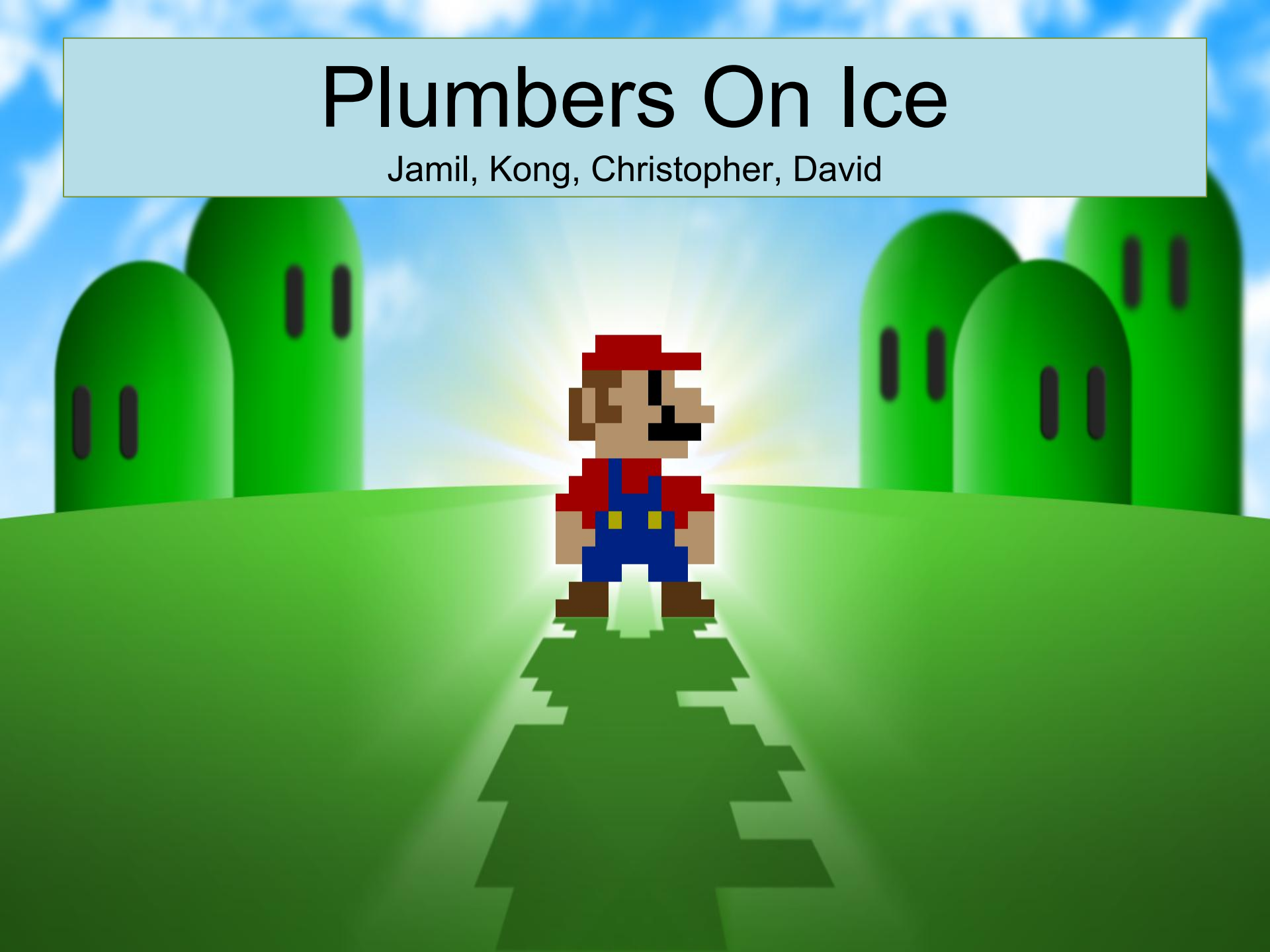
Plumbers On Ice

Jamil, Kong, Christopher, David



Project Updates

Agenda

- ❑ Project Updates
- ❑ Requirements
- ❑ Architecture & UML
- ❑ GRASP Patterns
- ❑ Frameworks
- ❑ Test Cases
- ❑ Mockups

i3 Requirements

Requirement #	Description
I0	A single installer file must facilitate all transfers of resources between the server and the mobile device.
I10	A progress bar must inform the user of remaining install items and predicted wait to complete installation.
C0	The container must be able to host multiple instances of the game application simultaneously.
B0	The client browser must have javascript enabled to view the web site.
OS0	The server must the most current version of JRE installed.
Pt0	The design shall adhere to a principle of high cohesion.
Pt10	A principle of reusable code will be adopted as much as possible. Reusable classes should be implemented.

i3 Requirements(cont.)

Requirement #	Description
Ar0	Sprites and animations should be cached if they are used more than once in the program.
GP200	Signals and data may be exchanged between state, but a change in state will present a different set of options for the user.
GP210	A character select state will be made available that allows both players to make a character selection before the game is started, and that starts after the last player selects a character.
GP220	A matchmaking state will search for players also in the matchmaking state before turning to character select.
GP230	A pause state will save the current view and its components but discontinue processing events and inputs.
GP240	A resume state will retrieve the save state of the current view and its components before initializing the processing of events and inputs.
S310	The web application view of the game will be available in minimized and full screen modes.

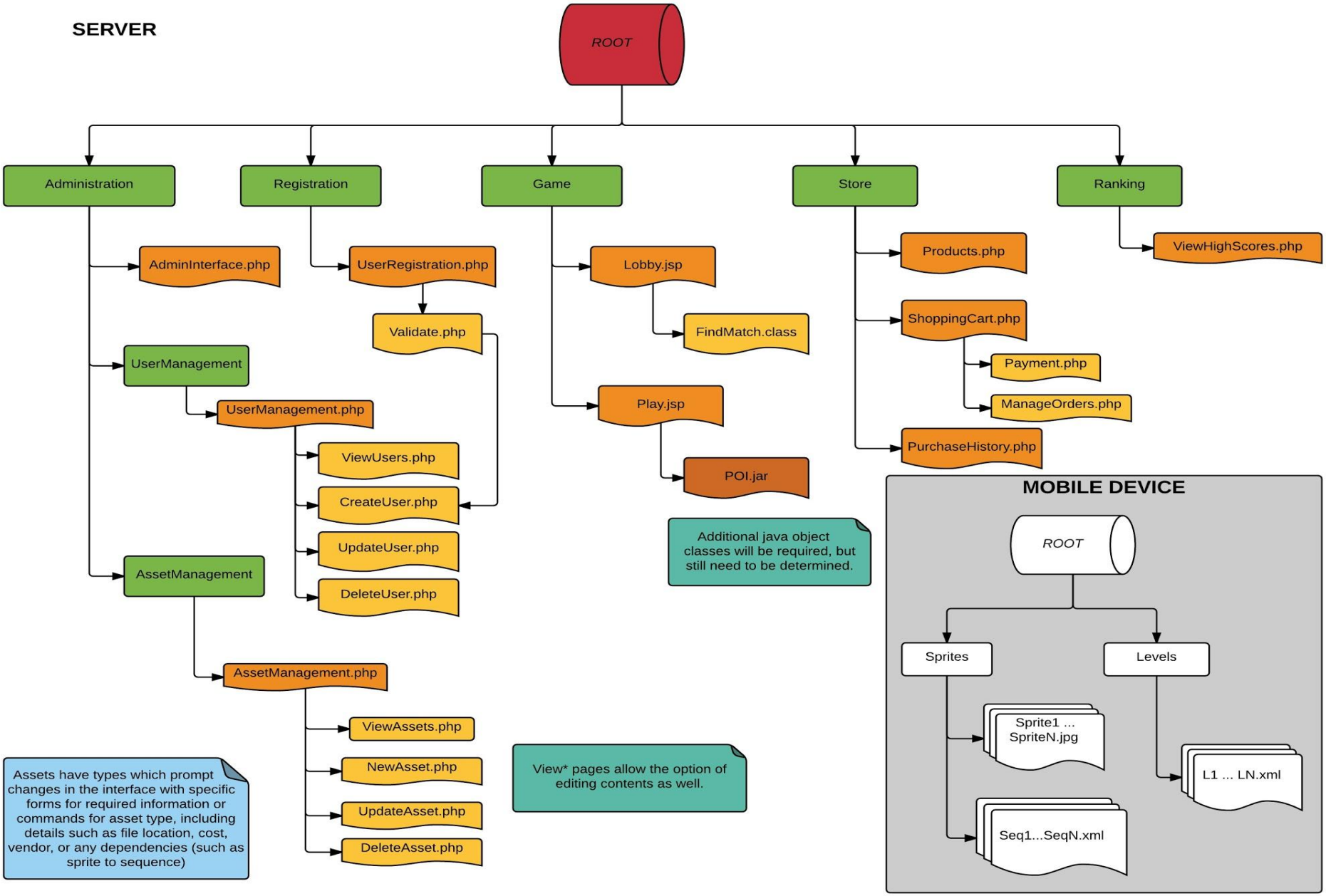
i3 Requirements(cont.)

Requirement #	Description
S400	The administrator must be able to add new maps to be used as assets.
S401	The administrator must be able to place enemies, blocks and decorations within levels that can be later accessed by players.
S402	The administrator must be able to add new enemies as assets and determine their behavior for the gameplay experience.

Architecture

Class
Communications
Directory Tree
Shared Resources
Event Handling
Dynamic Process
UML
Sequences

Architecture - Directory Tree

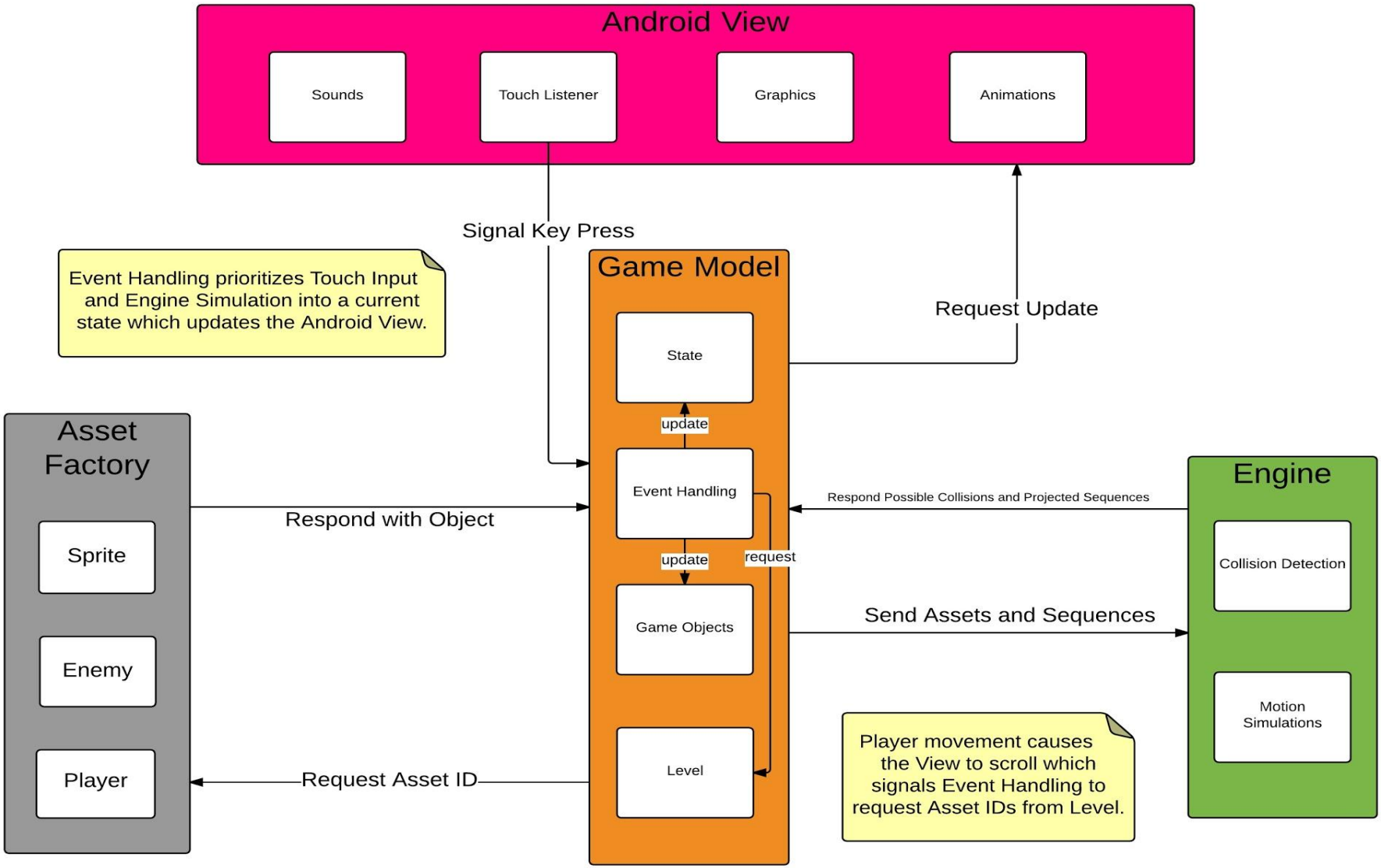


Data Retention

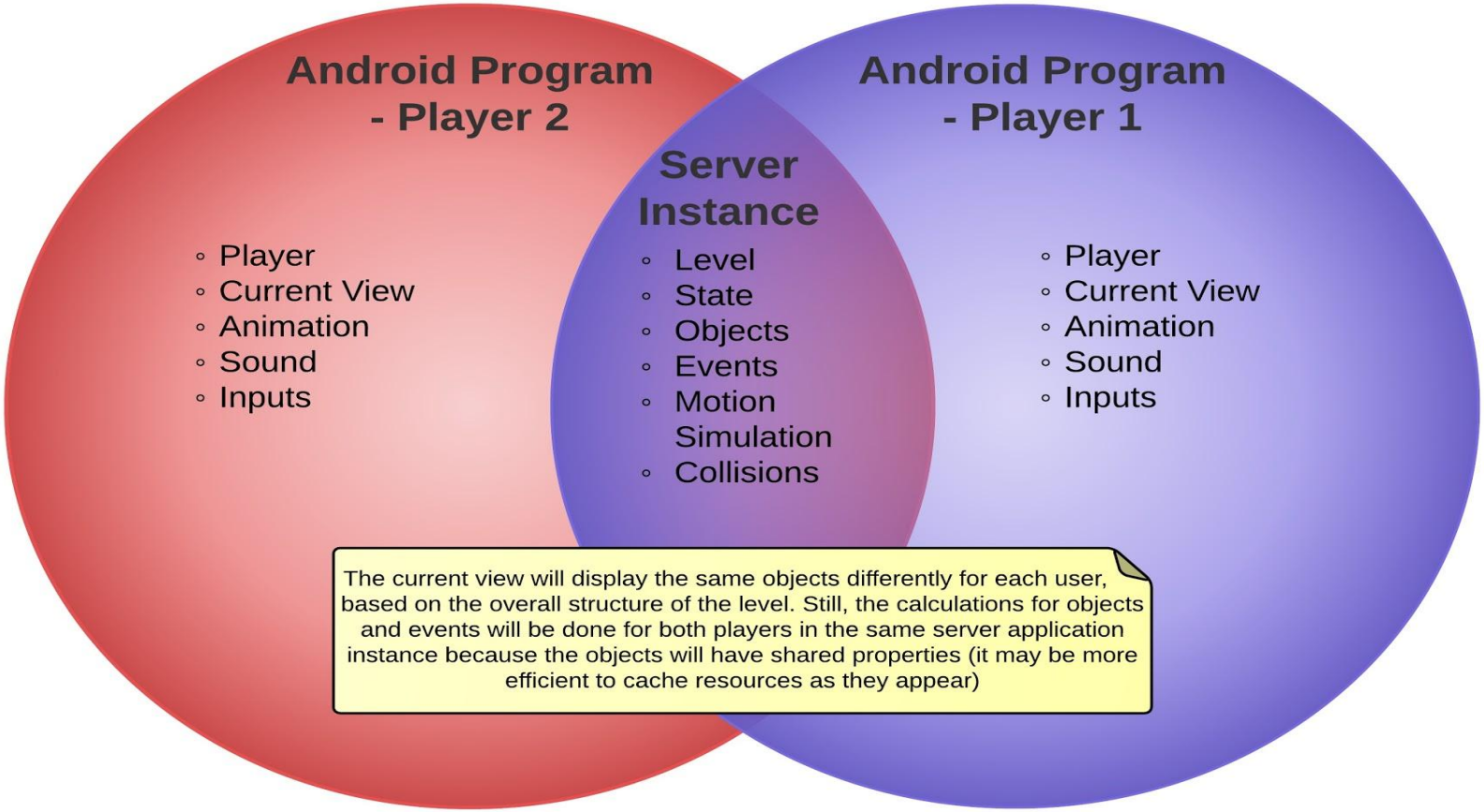
Match history - retain for 30 days

User accounts - remove after 1 year of last login

Architecture - Class Communications Diagram

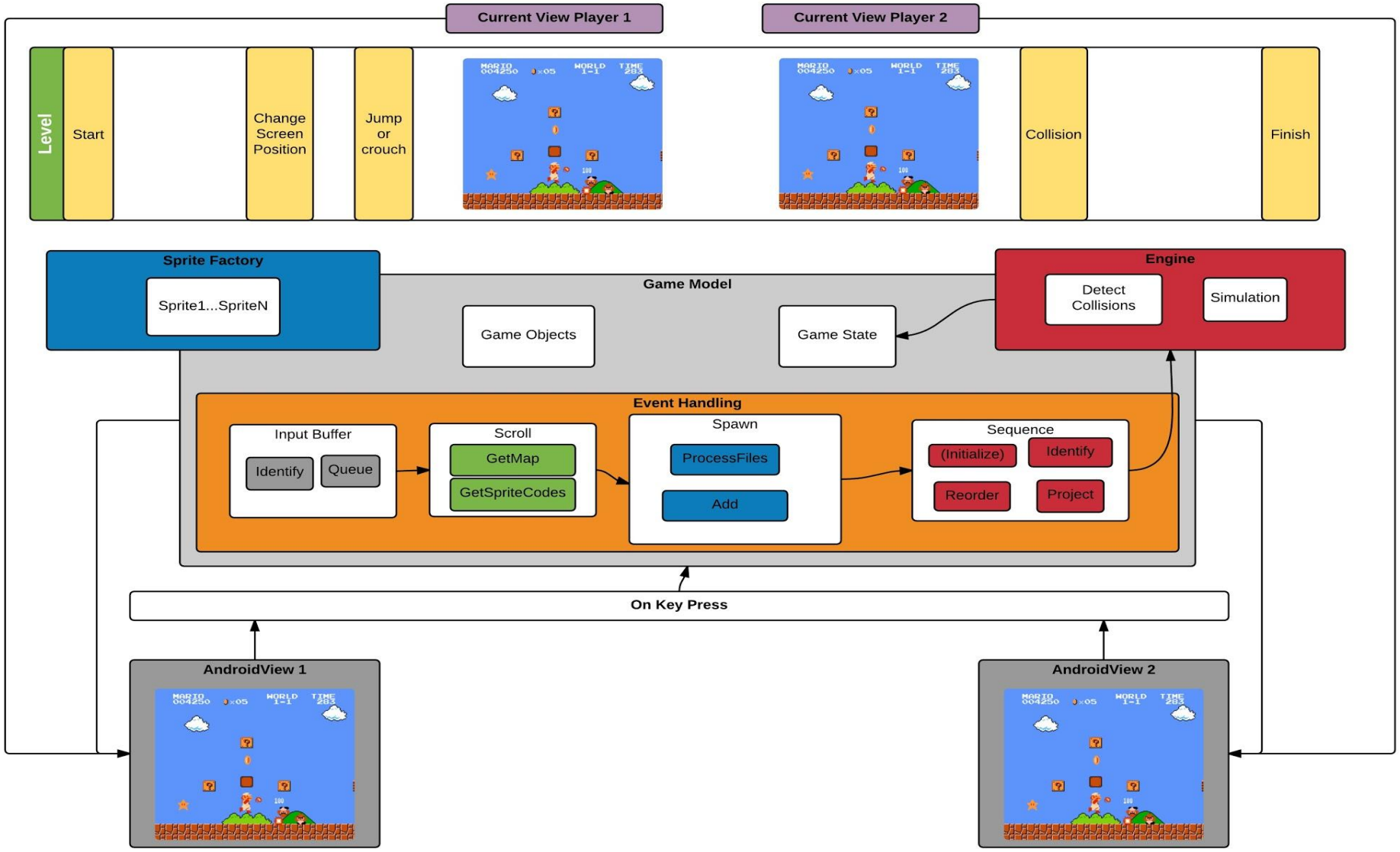


Architecture - Shared Resources Venn Diagram

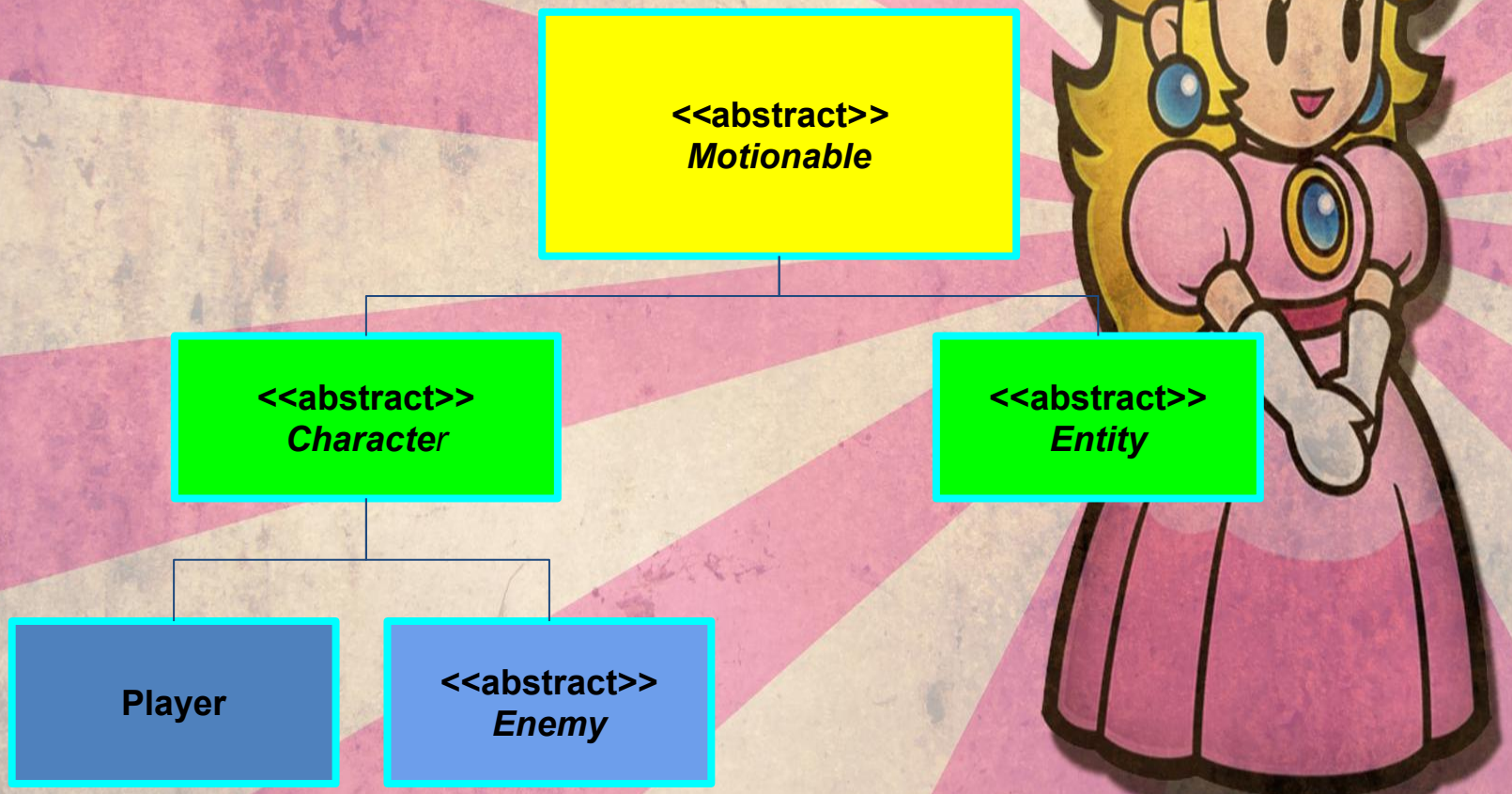


Architecture - Dynamic Process Diagram

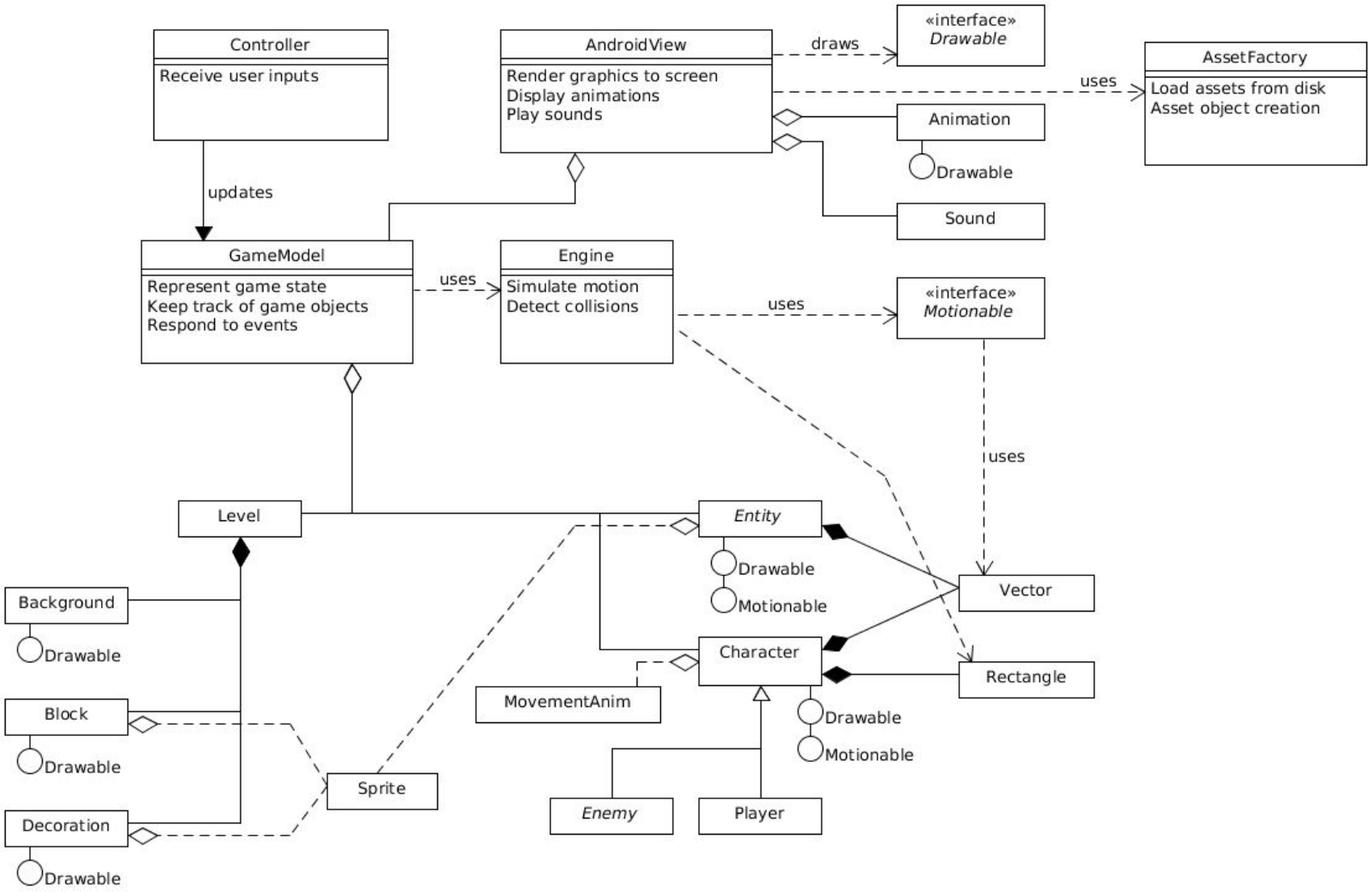
Event Handler



UML - Inheritance Model



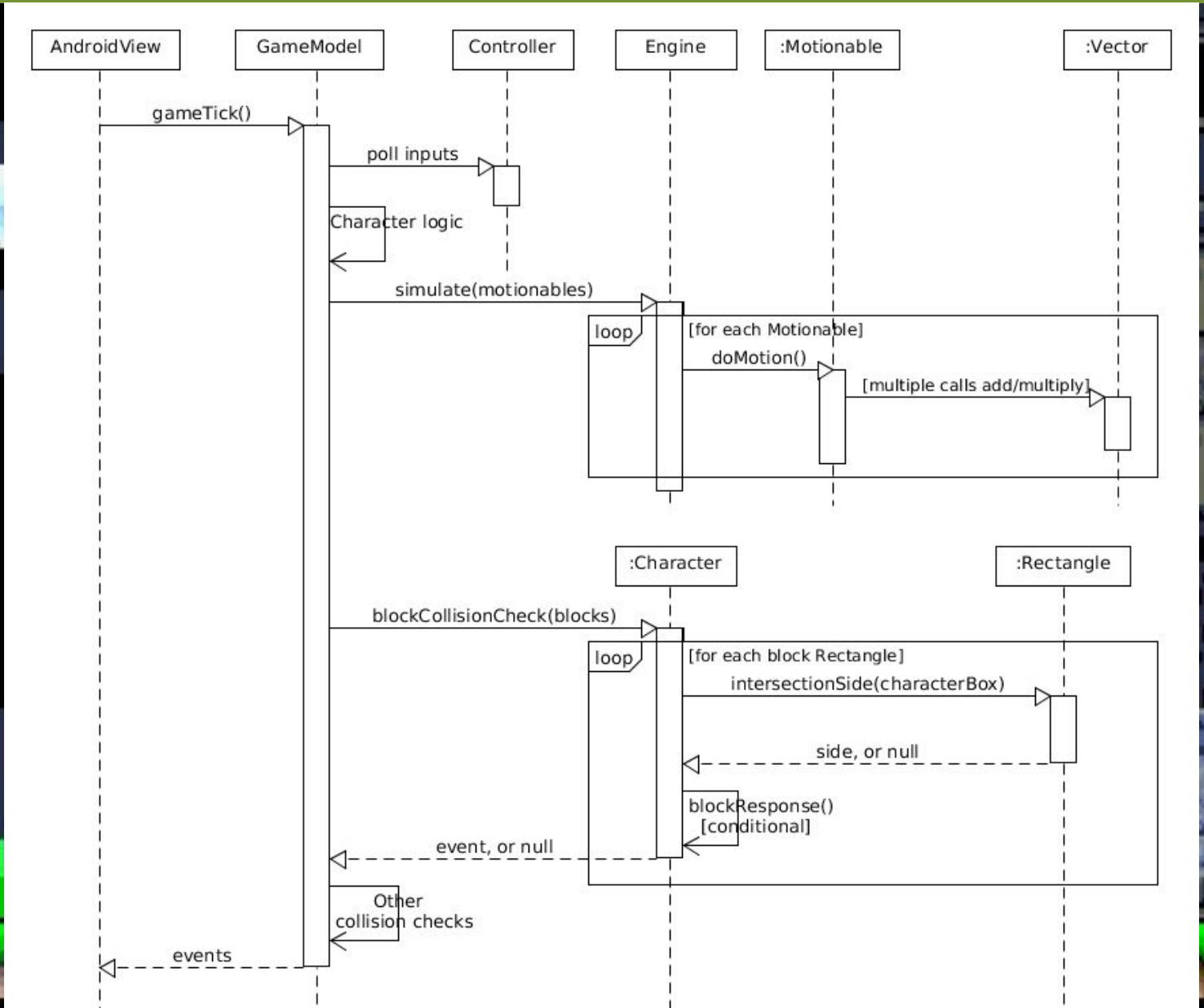
UML - Class diagram (v3)



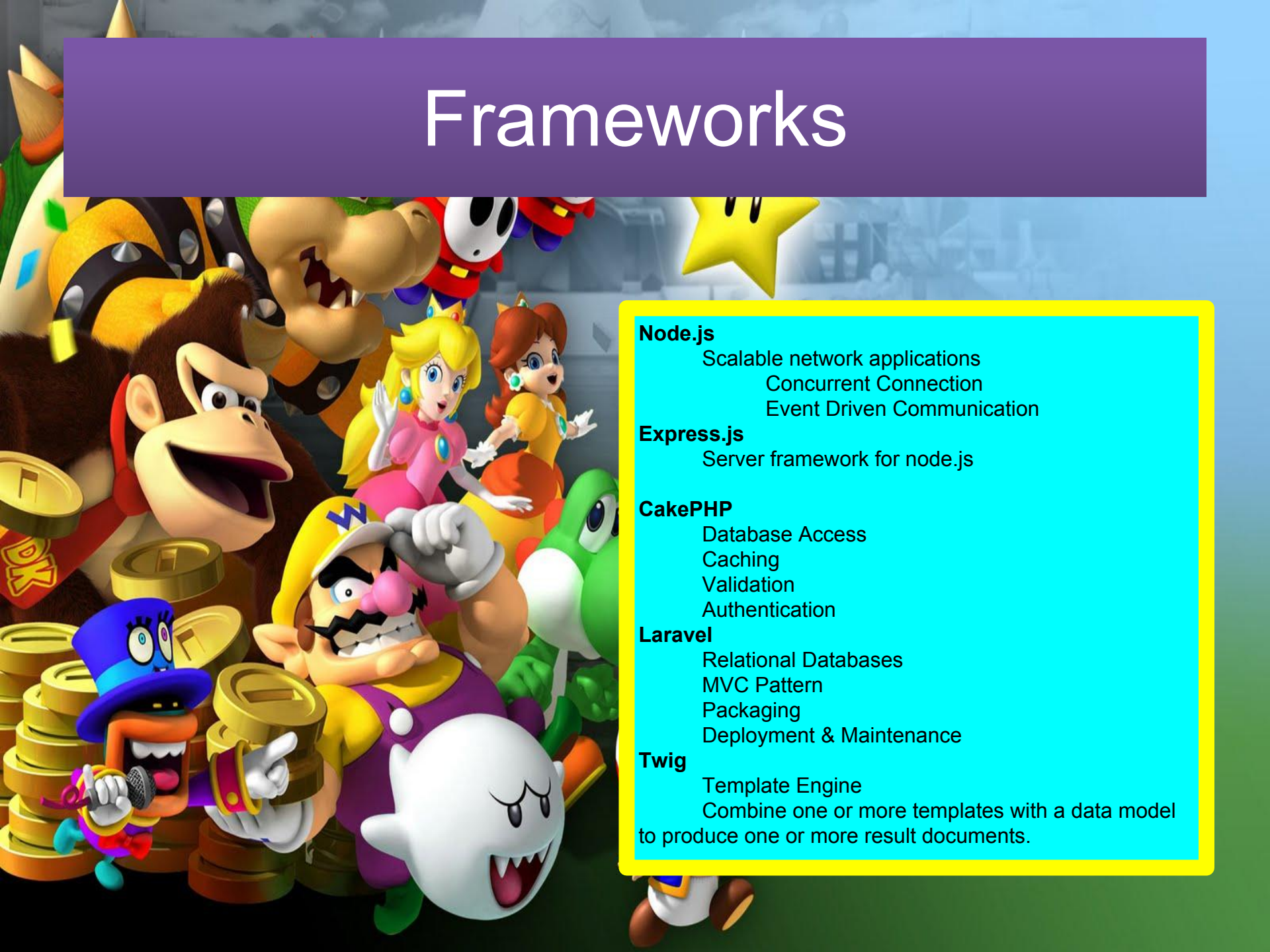
GRASP Patterns

- High Cohesion @ All
- Low Coupling @ Motionable
- Factory @ AssetFactory
- Polymorphism @ Character
- Creator @ Game Model
- Information Expert @ Game Model

Architecture - Sequences



Frameworks



Node.js

Scalable network applications

Concurrent Connection

Event Driven Communication

Express.js

Server framework for node.js

CakePHP

Database Access

Caching

Validation

Authentication

Laravel

Relational Databases

MVC Pattern

Packaging

Deployment & Maintenance

Twig

Template Engine

Combine one or more templates with a data model to produce one or more result documents.

Frameworks (continued)

LWJGL (Light Weight Java Game Library 3)
LibGDX (Cross Platform Game Development)

- Streaming music and sound effect playback for wav, mp3 and ogg files
- Input handling
- Math and Physics
- File I/O and Storage
- Networking

Test Cases

Test Case ID 001	Test Case Description	Test Case for adding game levels
Created By Kong Vue	Reviewed By	Version 1

Use Case
ID: 14

QA Tester's Log

Tester's Name		Date Tested		Test Case (Pass/Fail/Not Executed)	

S #	Prerequisites:
1	Server has been set up and configured
2	FTP client is installed and configured

S #	Test Data Requirement
1	Game assets are added successfully

Test Conditions

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended / Comments
1	Open FTP client and connect to server	FTP client should connect to server		
2	Upload assets from the host computer	Files should be uploaded to server		

Test Cases

Test Case ID 001	Test Case Description	Test Case for adding game levels
Created By Kong Vue	Reviewed By	Version 1

Use Case
ID: 14

QA Tester's Log

Tester's Name		Date Tested		Test Case (Pass/Fail/Not Executed)	

S #	Prerequisites:
1	Server has been set up and configured
2	FTP client is installed and configured

S #	Test Data Requirement
1	Game levels are added successfully

Test Conditions

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended / Comments
1	Open FTP client and connect to server	FTP client should connect to server		
2	Upload levels from the host computer	Files should be uploaded to server		

Test Cases

Test Case ID 001	Test Case Description	Test Case for adding game levels
Created By Kong Vue	Reviewed By	Version 1

Use Case
ID: 14

QA Tester's Log

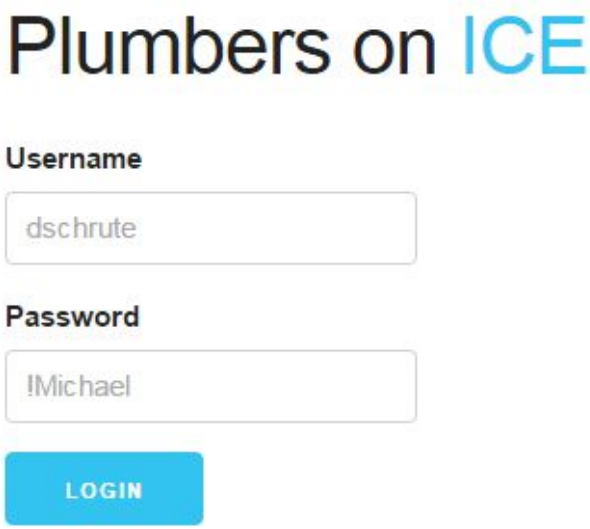
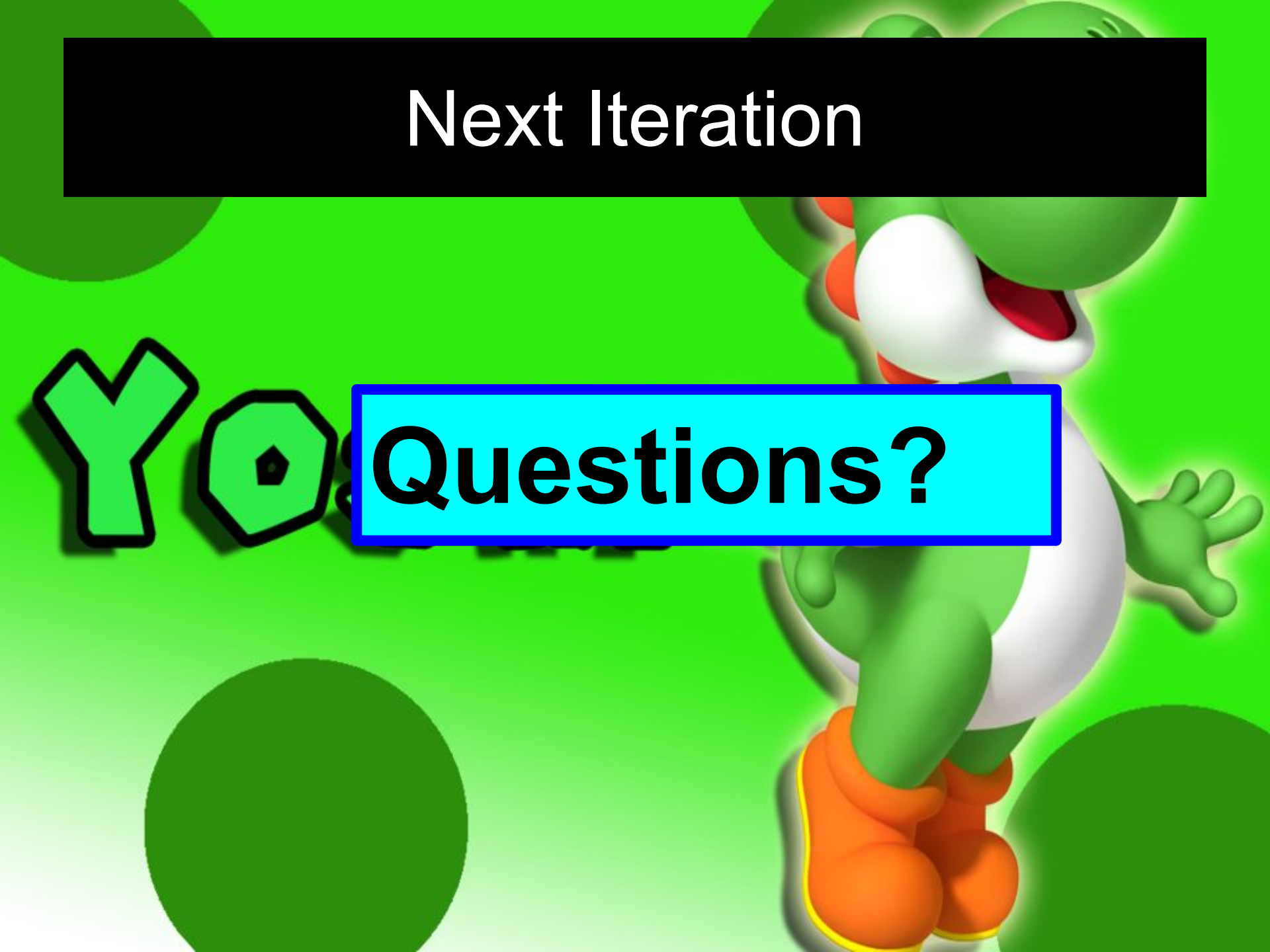
Tester's Name		Date Tested		Test Case (Pass/Fail/Not Executed)	

S #	Prerequisites:
1	Game play has been started

S #	Test Data Requirement
1	Game is paused
2	Game is resumed

Test Conditions

Step #	Step Details	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended / Comments
1	Press the pause button	Game video and sound pauses		
2	Press the resume button	Game video and sound resumes		


Plumbers on ICE
Username
dschrute
Password
!Michael
LOGIN

Next Iteration