

**Game**

Application (it is what's run)

- Initialize Model, View, and Controller

- View
- Model
- Controller

**View**

- Handle all aspects of game GUI.
- Give easy access to important elements in the GUI.

- JavaFX elements
- Model

**ViewStart**

- Handle Splash Screen
- Take player to the game

**ViewGameOver**

- Handle Game Over screen

**Model**

- Create the player
- Give easy access to the player

## Ctrl

- Handle user input
- Run all periodic/per frame actions of all classes
- Random, but strategically, create all enemies.
- Handle currency and tower construction

- Model
- View
- ViewObj
- Fighter
- Enemy
- TowerEnum
- EnemyEnum
- Player

## GameNoise

- Play music and sounds

- Task (threading)
- JavaFX MediaPlayer

## ViewObj

Mob, Tower

- Create an image on the game screen
- Allow for image transformations, i.e. translation and rotation
- Allow for per frame actions

- View
- Ctrl

## Mob

ViewObj

Player, Enemy, Projectile

- Move. i.e. create smooth per frame translation

<b>Player</b>		Mob
<ul style="list-style-type: none"> <li>Handle the different looking and moving directions.</li> <li>Tie a combat object to the on-screen player</li> </ul>	<ul style="list-style-type: none"> <li>Ctrl (moves Player)</li> <li>Fighter</li> </ul>	

<b>Tower</b>		ViewObj
<ul style="list-style-type: none"> <li>Tie a combat object to the on-screen Tower</li> </ul>	<ul style="list-style-type: none"> <li>Fighter</li> </ul>	

<b>Enemy</b>		Mob
<ul style="list-style-type: none"> <li>Tie a combat object to the on-screen enemy</li> </ul>	<ul style="list-style-type: none"> <li>Fighter</li> </ul>	

<b>Projectile</b>		Mob
<ul style="list-style-type: none"> <li>Check for collisions with enemy Fighters.</li> <li>Deal damage to enemy Fighters upon collision.</li> <li>Despawn after specified time period.</li> </ul>		

<b>Fighter</b>		PlayerFighter
<ul style="list-style-type: none"> <li>Handle all combat related actions, including:</li> <li>Have health.</li> <li>Attack with appropriate frequency.</li> <li>Target enemies appropriately.</li> <li>Take damage.</li> <li>Die when health is too low.</li> <li>Execute per frame actions</li> </ul>	<ul style="list-style-type: none"> <li>Ctrl</li> <li>Tower</li> <li>Enemy</li> <li>Projectile</li> </ul>	

PlayerFighter		Fighter
<ul style="list-style-type: none"><li>• Game over upon dying.</li><li>• Shoot in direction of mouse</li></ul>		<ul style="list-style-type: none"><li>• Player</li></ul>