

<u>Class:</u> TowerDefenseGame	
<u>Responsibilities:</u> <i>Knows and displays score, previewed tower stats, money</i> <i>Knows difficulty (cost multiplier)</i> Manages time system (constant runs/sec) Runs gameplay loop through board Validates buying of towers in upper UI Creates and passes enemy spawns to rows through board	<u>Collaborators:</u> Board Tower Enemy

<u>Class:</u> Board	
<u>Responsibilities:</u> <i>Knows all rows that make up board</i> Iterates time step update over rows Delegates addition of towers and spawning of enemies to appropriate rows	<u>Collaborators:</u> TileRow

<u>Class:</u> TileRow	
<u>Responsibilities:</u> <i>Knows number of enemies who have passed the end</i> <i>Knows tiles in row</i> Handles transitions of enemies and projectiles between tiles Handles spawning of enemies in last tile Handles enemies reaching end of row Iterates time step update over tiles	<u>Collaborators:</u> Tile

<u>Class:</u> Tile	
<u>Responsibilities:</u> <i>Knows the tower, projectiles, and enemies on it</i> Iterates time step update over enemies, projectiles, and towers Handles collision detection between projectiles, enemies, and towers Facilitates impact of collision between projectiles, enemies, and towers Spawns projectiles from towers	<u>Collaborators:</u> Tower Enemy Projectile

<u>Class:</u> Tower	
<u>Responsibilities:</u> <i>Knows projectile shot</i> <i>Knows shot frequency</i> <i>Knows health</i> <i>Knows design (display object)</i> Produces projectile to be spawned Reduces health	<u>Collaborators:</u> Projectile

<u>Class:</u> Enemy	
<u>Responsibilities:</u> <i>Knows attack damage rate</i> <i>Knows health</i> <i>Knows movement speed</i> <i>Knows design (display object)</i> <i>Knows local position</i> Reduces health Attacks tower Moves left	<u>Collaborators:</u> Tower

<u>Class:</u> Projectile	
<u>Responsibilities:</u> <i>Knows damage</i> <i>Knows speed</i> <i>Knows design (display object)</i> <i>Knows local position</i> Hits enemy Moves right	<u>Collaborators:</u> Enemy