

Term Project: Tank Game Class Diagrams

Package Organization – (Classes marked with * are meant to be reused)

- Animations
 - Explosion* – Loads a sprite as a Basic Object and iterates through the given sprite list
 - Sprite Loader* – Loads sprite sheet image from file into memory and can calculate the number of sprites in a sheet
- Controllers
 - Collision Detector – Reports collision between walls, tanks, and bullets. Also triggers certain sounds
 - Game Clock* – Observable class that keeps track of the number of frames that have been created
 - Input Controller – Accepts input from keyboard and places key presses in an array list. Can either set tank movement or return the array list of keys.
 - Key Object* – Basically a struct for holding a key event as well as whether the key was pressed or released.
- Map
 - Game Frame* – Frame extension that takes in the Game World Panel.
 - Game Menu – Initial menu for the game for selection of a local or networked game.
 - Game World – Main game engine. Initializes most game object and is responsible for running the game thread and printing all objects.
 - Wall List – Creates an array list of all the walls and their locations on the map.
- Player
 - Player View – Takes the image of the map and breaks it down into one or two views that follow the corresponding tanks. Also displays
 - Mini Map – Downsizes the whole map for display on the player view.
 - Health Bar – Object for visual representation of player's current health. Used in Player View.
 - Winner Display – Creates an on-screen display indicating which tank won the game.
- Objects
 - Basic Object* – Class for a standard object. Can be extended or used for objects that don't require specific capabilities. All other objects extend basic object except Key Object.
 - Bullet Object – Holds specific variables for holding direction of the bullet as well as movement.
 - Tank Object – Holds specific variables for tank name, color, direction and movement.
 - Wall Object – Holds wall destructibility Boolean.
- Resources
- Sounds
 - Game Sound – Class used for playing game sounds. Holds all game sounds that can be initiated via methods.
- Tank Game
 - Tank Game (Main) – Game is launched from here. Basic parameters can be set here (size of the panel).

