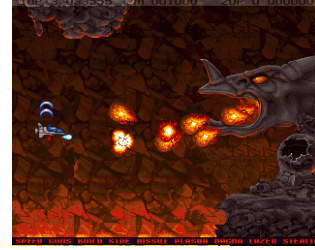# CENG 241 Game Projects

*Please work **individually** or set up a team of up to **four** members and select one of the game projects below.*

Game categories:

1. Racing
2. Platformer
3. Shoot 'em up
4. Tower defense clone
5. Angry birds clone

Your game should provide colorful text-based drawings and support keyboard controller.

Racing

The player controls a car (or another racer device) to reach to the finishing line before the other opponents reach in order to win the game. The player should avoid hitting other objects and try not to damage his/her racer and keep on the way.

More information: https://en.0wikipedia.org/wiki/Racing_video_game

Potential classes: Car, EnemyCar, Road, Obstacle, Checkpoint line

Platformer

The player controls a character to jump or fall down from one platform to another to reach the goal. The character may encounter some obstacles or enemies to deal with and must avoid touching them.

More information: https://en.0wikipedia.org/wiki/Platform_game

Potential classes: Game, MainCharacter, World, Platform, Enemy, Goal

Shoot 'em up

The player controls a ship to move in space and hit incoming enemy ships by firing. Similarly, enemy ships try to destroy to the player's ship. The player should avoid bullets and hitting other objects.

More information: https://en.0wikipedia.org/wiki/Shoot_'em_up

Potential classes: Game, MainShip, EnemyShip, Bullet and other obstacles

Tower defense clone

The player controls a sentinel to set up, start and upgrade weapons to protect the main base from enemy attack. He/she wins when all wave attacks are evaded. The game ends if the main base is destroyed.

More information: https://en.0wikipedia.org/wiki/Tower_defense

Potential classes: Game, Sentinel, Enemy, Base, Weapon, Bullet

Angry birds clone

The player throws an object to destroy/capture enemy zone by using physical interaction of obstacles such as walls, enemy units. Angry birds, Worms are famous game examples in this physics puzzle game sub-genre.

More information:

https://en.0wikipedia.org/wiki/Angry_Birds

https://en.0wikipedia.org/wiki/Worms_(series)

Potential classes: World, Character, Enemy, Obstacles, Collectables

Notes

- You <u>MUST</u> use C++, Object Oriented Programming techniques and **rlutil header library** to create and manipulate colorful text-based visuals.

- You <u>MUST</u> submit a compilable and working source-code.

- You <u>MUST</u> design all aspects of your game and write codes on your own!

- You <u>MUST</u> present your work to one of the course instructor/assistants before submitting.

- You <u>MUST</u> obey all of the rules above, otherwise you and your team members will have 0 points.

- Your game project will be evaluated considering how many classes you defined, the association and hierarchy setup between classes and modules, the interaction between objects, playability of the game and visual quality.

- Analyze **rlutil** examples and learn how to use **rlutil** before starting to code.

Due date: January 11, 2019.

GOOD LUCK!