

CSC 413 Term Project: Software Reusability Practices via Wingman and Tank Multiplayer Games Development

(Spring 2013)

1st milestone (Design Documents) due by 4/14 11:59pm [30%]

2nd milestone (Wingman Game) due by 4/28 11:59 pm [40%]

3rd milestone (Tank Game) due by 5/12 11:59 pm [30%]

You need to study Game Maker version of Wingman and Tank games. This will help you understand the steps needed to make the 2D sprite-based games. Lecture slides contain the steps to make those games and explain how resources are controlled in the “Object” and the “Objects” listen to events and actions are set up accordingly. By comparing two games, you should create proper super classes that can handle common tasks in abstract level and then sub classes will handle specific tasks.

Design of these classes has to be clearly explained. You need to list all the classes that will be used in your games. Each class should include important states and behaviors. Inheritance relationship should be clearly specified.

During the actual development, you may make some changes to the design, then you will have to submit to me a modification of design document that explain why the modification is necessary and what was the issues of the original design. Without it, any changes from the original design won't be accepted for credit.

Requirement for Wingman game:

Complete working version of wingman game from the given example is worthy 100 points (class presentation using PPT and documentation).

(Make sure that there are different types of enemy planes including ones that come from the behind of the plane or shoot bullets in the diagonal directions, stronger bullets, etc. Collision effect of enemy planes is also different)

Missing components lose points proportionally.

Explosion effect – 10 points

Explosion sound – 10 points

Bullets shooting in diagonal direction (and collision detection) – 5 points

Score board at the end of game – 5 points

Health bar – 5 points

Background music – 5 points

2 more spare life – 5 points

Diverse types of enemy planes – 10 points

Support for 2 players – 10 points

Extra credit can be also given.

If you wish, you may choose a different game from the Game Makes examples. You need to discuss with me before you start working on this.

Requirement for Tank game:

20 points: Complete working version of tank game from the game maker version is worthy 100 points (class presentation using PPT and documentation on 5/14 & 5/16 --- comparison between class diagrams between two games).

Missing components lose points proportionally.

Explosion effect – 20 points (Tank & blocks – disappearing and appearing over time)

Explosion sound – 5 points

Stronger Bullets when player picks up bonus – 5 points

Scores – 5 points

Health bar – 5 points

Background music – 5 points

2 more spare life – 5 points

Mini map – 30 points

Extra credit can be also given.