

CS-224: Object Oriented Programming & Design Methodologies

Assignment 06

Duration: 1 Week

This assignment is about declaring child classes and managing memory using a Doubly Linked List.

TO DO:

In this assignment, you will be given a **Unit** class from which an aircraft will be displayed on screen. You will use this class as the base class and create two child classes namely **Enemy** and **Bullet**. The demonstration will be given in class to show how the classes will behave.

The **Enemy** class's objects will be created outside of the screen at random locations and they will move towards the bottom of the screen. As they will go beyond the bottom edge of the screen, they will get de-allocated.

The **Bullet** class's objects will be created at the location of the *plane* object's location and will move up. They will get de-allocated as they move beyond the top edge of the screen.

This should work without errors and crashing for hundreds of objects on screen so it must be thoroughly tested.

BONUS:

The same bonus condition exists in this assignment as well. If you want to gain bonus marks you will need to:

Check for collision detection between the bullets and the enemy aircrafts. In case there is a collision, both the enemy and the bullet will disappear and an explosion will be created at the point of impact.