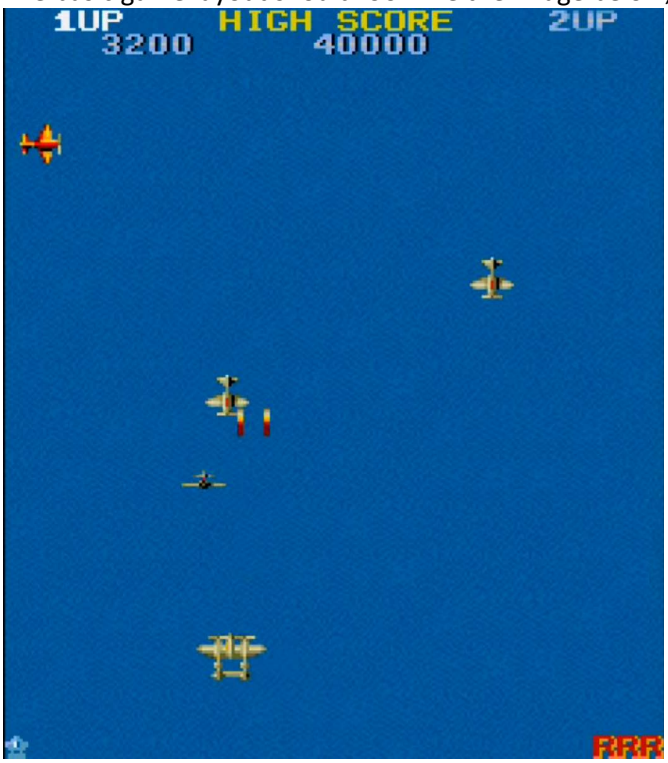
ICS4U - Summative

Introduction:

Your final task of the year is to develop a Java based game that is a variation of a classic vertical-shooter game called 1942. This program **must** be entirely developed by you and your group members, but you are free to surf the web to get ideas. In other words, every line of code **must** be your own. Marks will be awarded for **creativity** and **effort**. The specific details of implementation are left up to you, but the following specifications must be followed:

Layout:

The basic game layout should look like the image below, but feel free to "tweak" it out.



Design:

Your code should, as always, be written elegantly and efficiently. For this reason, you **must** use the concepts of inheritance and polymorphism that were discussed in class. At the very least, you should have the following class hierarchy:

- GameObject.java
    - Player.java (can have a health bar or one shot, one kill)
    - Enemy.java
    - PowerUp.java

You are free to add any other classes that you see fit, but you should always be following best programming practices.

Physics: The motion of game objects is left up to you, but try to make it as "realistic" as possible.

Enemies:

You should have a variety of enemies that attack you and they should have varying hit-points. At the end of the level, the user should be faced by a challenging boss.

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Power-ups:

As enemies are destroyed, they leave behind the following power-ups:

1. Bomb: a weapon that causes massive damage to the enemies (the player starts with 3)
2. Weapon Upgrade: the player's weapon is upgraded (max level is 5)

Not every enemy should leave behind a power-up!

Control:

The game can be played via keyboard, mouse or both. To have consistent controls, the following chart must be followed:

Move	Keyboard	Mouse
Left	Left arrow key	Move mouse left
Right	Right arrow key	Move mouse right
Shoot	Spacebar key	Left mouse click
Bomb	B key	Right mouse click

Sound: Your game **must** include sounds, but feel free to be as creative as you like here.

Project Due Date: Friday, June 8, 2018