



National University

of Computer & Emerging Sciences Peshawar Campus

Name: _____

Roll No: _____

Program: CS

Semester: Spring - 2020

Time Allowed: 6 hrs.

Course: Object Oriented Programming Lab

Examination: Lab Exam

Total Marks: 50

Date: 18th June, 2020

Lab Instructor: Muhammad Hamza

Instructions:

1. Read all the instructions carefully.
2. Only submit .cpp file without enclosing it in any folder or zip file.
3. Plagiarism will not be tolerated and will be given straight 0 to anyone involved.
4. The exam is based on analytical and logical skills, so it's part of the exam to understand all the requirements on your own.
5. You can use any concept of OOP which fits best for the requirement.
6. Score will be based on your creativity and working program.
7. Use dynamic variables only.
8. All the submissions should be made on the slate only.
9. Please keep time limits in mind and try to submit the exam 15 min before end time.

Simple Alien-Monster Game

You are required to build a small console based game using the concept of OOP (object oriented programming) applied to it. The game would consist of two major concepts. First being the Enemy and the second Type being the Defenders.

Enemy:

Enemy would be a generic class consisting of 2 major types as mentioned below and have properties/attributes like size, color etc (Feel Free to add any fictional attributes as per your desire) along with some common behaviors like Attack(), Capture(), Destroy() etc.

Aliens

- Aliens would be those species which would have some fictional horrible attributes. They would be attacking the planet from the dark black sky.
(Feel Free to add any fictional attributes as per your desire)
- Aliens would usually have the behavior of shooting with laser beams for the attack purpose. Similarly since they are fictional characters so could be destroyed or killed whenever a bullet hits their head.

Monsters

- Monsters would be those horrible species which would be attaching the planet from the ground with sharp weapons.
(Feel Free to add any fictional attributes as per your desire)
- Monsters would usually have the behavior of killing with their thorns or sharp weapons for the attack purpose. Similarly since they are fictional characters so could be destroyed or killed whenever a 5 or more bullets hits their head.

Note: FOR ALL BEHAVIOURS, YOU JUST NEED TO PRINT THE BEHAVIOUR TEXT. NO NEED TO IMPLEMENT ATTACKING GAME FUNCTIONALITY.

Defenders:

Ground Army

- A Type of Defender which has the duty to defend their land and kill the enemies on the Ground (Monsters & Aliens). (Feel Free to add any fictional attributes and behaviors as per your desire). For killing the enemy it would have an attack method.

Airborne Army

- A Type of Defender which has the duty to defend their land and kill the enemies who are attacking from the sky.

GOOD LUCK :)