# National University of Computer and Emerging Sciences, Lahore Campus



Course: **Programming Fundamentals** Course **CS 118** Code: Program: **BCS & BSE** Semester: Fall 2021 **Due Date** 31-Dec-2021 at 11:59 pm **Total Marks: CS-1G & SE-1A** Section: Page(s): 3 15 Type: **Project** Weightage

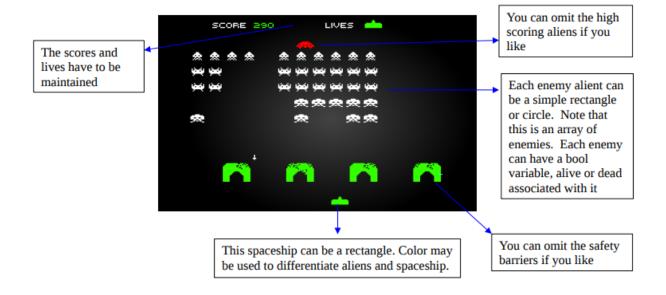
## **Important Instructions:**

- 1. Submit your solution named as your roll number, i.e., 21\_1111.cpp. Do not zip your file.
- 2. You are not allowed to copy solutions from other students. We will check your code for plagiarism using plagiarism checkers. If any sort of cheating is found, negative marks will be given to all students involved.
- 3. If we find that you have copied code from the Internet, you will get negative marks.
- 4. Late submission of your solution is not allowed

### **Requirements of PF Project:**

- 1. Colors should be used.
- 2. You can do your project in groups (A group should not include more than three students).
- 3. Graphics library is not compulsory to use. However, you can use it if you want.
- 4. You cannot use any concept not taught in the class, such as dynamic memory, vectors, maps, string class, etc.
- 5. You can use struct.

Space shooter is a popular shooting game. In which our galaxy is attacked by alien shooters. The aliens intend to destroy everything on our planet. Your goal is to shoot them all before it is too late.



Your task is to make a simplified version of this game. For Example:

```
I N S T R U C T I O N S

use (arrow keys / A or D ) to move around

press space to fire bullets

avoid hitting space debris

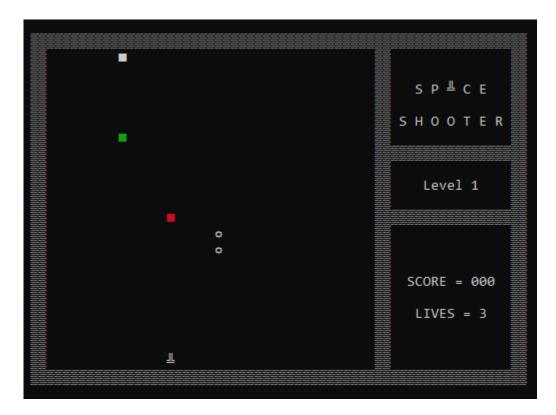
different colored debris gives different score

esc key during game restarts level

Press Space key to Start Level 1

Press Esc key to Exit 1
```

At the start of the game display some playing instructions. After pressing any key like space your game will start like this:



### **Game Description:**

The game includes a spaceship that will fire the bombs when the user hits the space bar. Now it is your choice you can change the buttons. However, if the enemy spaceship hits the user spaceship, he/she will lose one life. There should be three lives in total and when the user loses all of his lives then he will lose the game and he has to start from level 1 again. If the user's score surpasses (level no\* 10), the user will proceed to the next level and in the next level there should be more enemy spaceships and the speed of the game should be faster. For each user, you should store his\her highest score in the file. When a user will complete all 5 levels, the user will win the game. After winning the game he/she should have an option to restart from level 1

#### **Bonus:**

You can add more frills in the game if you want.

#### Note:

You can come up with another idea if you want. However, you will need to discuss the idea with me via email or Google meet.

You cannot select the following games:

- 1. Tic-tac-toe
- 2. Snakes-and-ladders
- 3. Checkers

