# **Department of Computer Science**

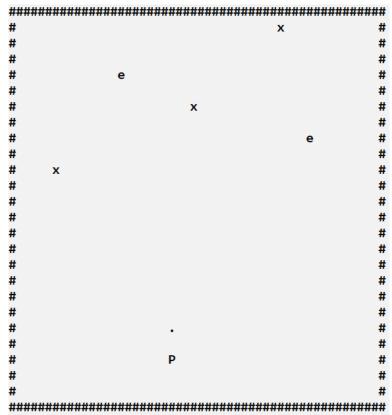


## University of Engineering and Technology, Lahore



## **Task 01:**

You have to make a 2D array according to your choose for storing the game details like the one shown below



Following are the required functions that should be written

- **1.** movePlayerLeft();
- **2.** movePlayerRight();
- **3.** fire();
- **4.** moveEnemy(char object, string direction);
- **5.** moveFire(int timeStep);
- **6.** printBoard();

**Instructions:** Do not use **gotoxy()** or **getCharAtXY()** Function for printing the data on the console. Instead store and retrieve all data in the same 2D array.

### **Task 02:**

Implement your Games with the following requirements.

- In the game project, you must have 3 different types of enemies for players to face. Enemies can vary on the base of their movements or on the base of their firing mechanism.
- Give players a certain number of lives, like hearts in a video game. Players start with a set number of lives, and they can earn more as they play.
- Also your game should have a firing mechanism. Both of your player and your enemies should fire (either arrows, bullets, or bombs).
- You should also include a health system. This means that the player and enemies will have a health bar or something similar to show how much health they have left.
- Make sure to include a scoring system as well. This means that players earn points for doing well in the game, like defeating enemies or finding special items. The more points they earn, the higher their score will be.
- For higher complexity you can add 2 or 3 levels of the game and in each level the maze settings changes.

### **Bonus Task:**

• Implement the game using 2D arrays for storing the game state.