Project Title: Space Invader Game

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Duration Covered: 21 September – 5 November
Group Members: Mugdho, Riad, Yasir, and Me (Ashfaq)
My Role: Individual Contribution Report

WEEK 1 (21 SEPT—27 SEPT): TEAM FORMATION AND PROJECT SELECTION
On the first day of class, our sir asked us to form groups of four members for the semester project. I formed a team with Mugdho, Riad, and Yasir. We discussed several project ideas and finally decided to make a Space Invader Game using the C programming language.We talked about how to build the game, what features to include, and how to divide our tasks. In the end, we decided that each of us would first create our own version individually using C, and later we would select the best ideas and combine them into one final version.

WEEK 2 (28 SEPT—3 OCT): CLASS BREAK AND RESEARCH
This week the classes were off, so I used the time to do additional research and learning for the project. I watched Youtube tutorials on how to create small 2D games using C and studied how graphics libraries like graphics.h or other modern alternatives can be used.I also learned about the structure of a game loop, keyboard input handling, and screen refreshing techniques. This week helped me understand the technical side of the project before starting the real coding.

WEEK 3 (4 OCT–10 OCT): TEAM AND PROJECT SUBMISSION
On 7 October (the 4th class), we submitted our team and project title online. After submission, I started setting up my C environment in Code::Blocks. I tested sample codes for initializing graphics mode and checked whether the screen and keyboard inputs were working properly.I also started sketching the basic layout of the game the player at the bottom, enemies at the top, and bullets moving upward. It was my first step toward implementing the real game.

WEEK 4 (11 OCT–17 OCT): GITHUB SUBMISSION AND PLAYER MOVEMENT
On 14 October (the 6th class), we submitted our GitHub project link. By this time, I had already written the initial part of my code, focusing on player movement. I implemented left and right movement using arrow keys and tested screen boundaries.I also tried adding a shooting function using the spacebar, where a bullet moves upward. I faced some difficulties with adding libraries, but with help from my cousin's suggestion, I was able to fix those and make the code run successfully.

WEEK 5 (18 OCT–25 OCT): ENEMY AND COLLISION DEVELOPMENT
This week, I focused on enemy creation and movement. I used arrays to store enemy positions and wrote logic to make them move horizontally. When an enemy reaches one end, it moves slightly downward similar to the original Space Invader style.I also implemented collision detection between the bullet and enemies, where the bullet disappears after hitting an enemy, and the score increases by 10 points. This was one of the most challenging but rewarding parts of the project.

WEEK 6 (26 OCT–5 NOV): TESTING, DEBUGGING, AND FUTURE PLANS
By this week, my individual version of the game was working well the player can move, shoot, and destroy enemies, and the score updates correctly. I focused on testing and debugging to fix minor timing and display issues. Now our team is preparing to review everyone's version. We plan to combine the best parts of each project better visuals, smoother movement, and cleaner code to create one final, high-quality game, in sha Allah.There are still some improvements I want to make personally, such as adding more levels, a game-over screen, and possibly some background visuals.