

# **CPP Course Project**

SDL Based 2D dungeon crawler game using Legend of Zelda Sprites. Cpp course project.

## **Team Members and Contributions:**

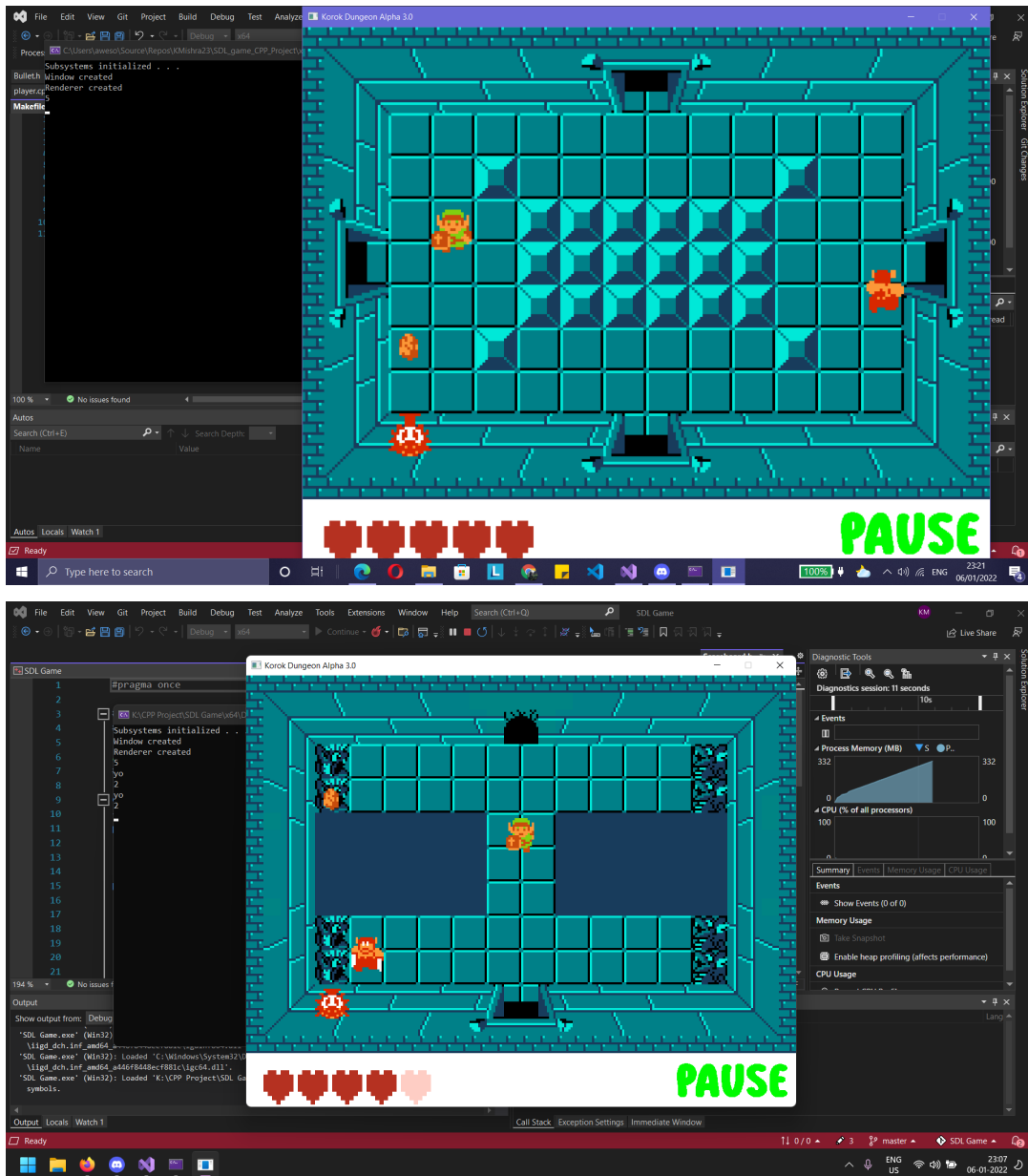
- Kaushik Mishra IMT2020137: Created the base of the game, rendering map, player movement, map drawing, texture cleaning, health system, score tracking and storage, makefile.
- Aamod BK IMT2020546: Player, Enemy, Turret and Bullet Animations and Attack mechanics. Player, Enemy and Turret spawn placement and integrating collision with Enemy and Bullet objects.
- Naitiksinh Solanki IMT2020051: All the collision related algorithms and making them optimised. Collisions with walls, enemies, bullets, gate detection and map changing.
- Jainav Sanghvi IMT2020098: Created Enemy and Bullet, Added Menu and Pause feature to the game.
- Sasank Karamsetty IMT2020540:

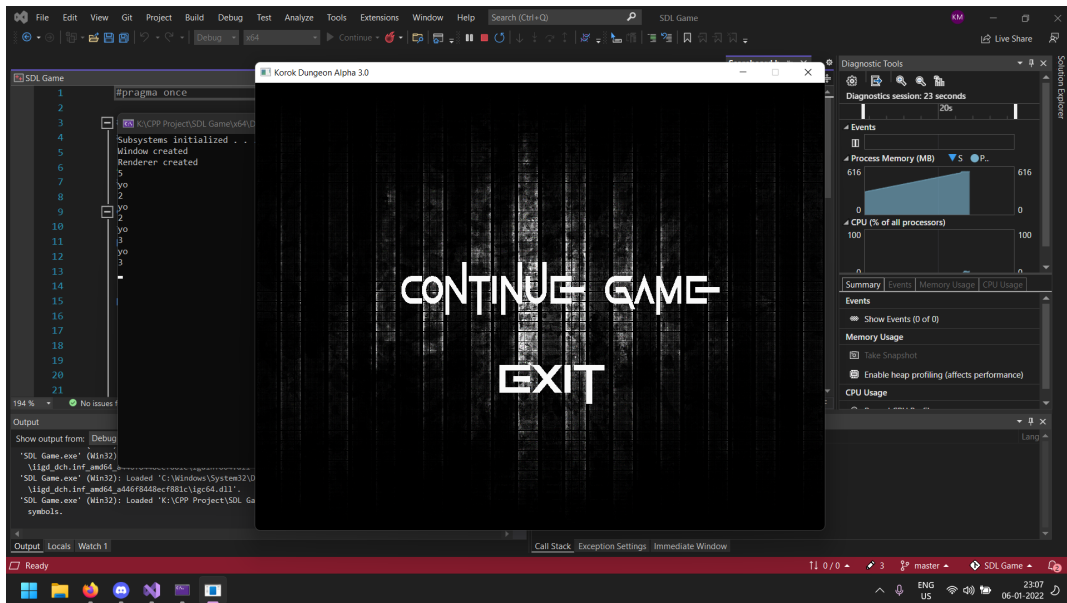
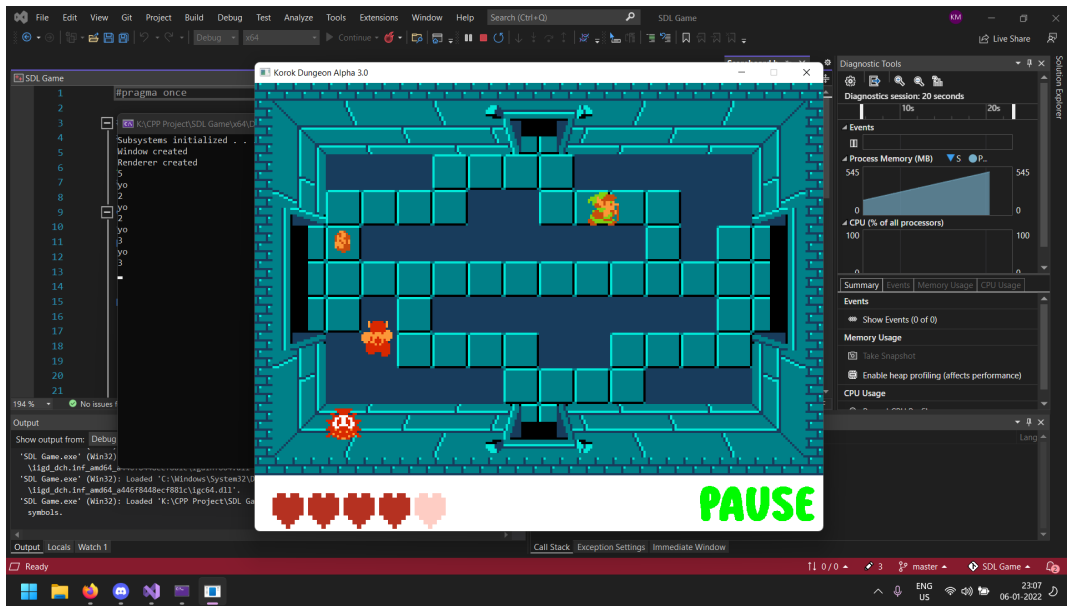
## **Features of the Game:**

- Health is reduced on taking hits and is displayed on the bottom-left of the screen. Game over on reaching 0 health.
- On successfully landing an attack on the enemy, the scoreboard is updated with +1 points and on collision with the enemy, the scoreboard is updated with -1 points.
- Three varieties of map are present in the game. On passing through a gate in the map, the map switches to a different one.

- Enemy walks in a fixed path in each map and player loses a point on collision with it. The turret fixed on the walls fires bullets at the player at fixed intervals, which on collision, reduces a point.
- A pause button is present on the bottom-right of the window which on pressing shows a pause menu, with options to Exit or Continue the game.

## Game Screenshots:





### Instructions to run the game:

- Clone the provided repository onto your local machine.
- Open the project using Visual Studio 2022. (open the .sln file)
- Run the game using the debugger.
- Alternatively, navigate to the SDL Game folder and run the game using the provided makefile.

### Controls of the Game:

- The arrow keys are used to control player movement.
- Holding down the spacebar key allows the player to attack the enemy.
- Player needs to evade collision with the enemy inorder to avoid losing points.
- Player can gain points on landing a successful attack on the enemy.
- Pause button is provided, which leads to the pause menu allowing the player to quit the game or resume it.

### GitHub Repository Link:

[https://github.com/KMishra23/SDL\\_game\\_CPP\\_Project.git](https://github.com/KMishra23/SDL_game_CPP_Project.git)