

# Final Project Report

Project name : **Escape Zombie**

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## Game Detail

This game inspired by Pacman. Objective of this game is to survive(don't get catch by zombie) as long as you can. Score is how long you alive. Screen size is 80x25 Characters. There have 3 scenes in the game.

### 1. Menu scene

project name

- use “\xb[0d:%dH” to set cursor and then draw logo with Hal\_delay().

Blink text

- use” \xb[1K” to clear line and redraw text.

Key input

- use HAL\_UART\_Receive\_IT to get key input from keyboard.

### 2. Gameplay scene

Frame rate

- the number of loop while have done / update 1 time.

Zombie

- use if else and rand() to make decision at section or go around map. They will increase number zombie in map every 60 score point.

Player

- use HAL\_UART\_Receive\_IT to control(up down left right) by W S A D button have to use interrupt because delay every time before you press keyboard is not the same so the time will not consistency. When move set cursor to player position and remove and redraw same as zombie move.

Collision

- use cursor position to detect zombie and player position if same game will over.

Score

- increase every loop in while(1).

### 3. game over

Key input

- use HAL\_UART\_Receive\_IT to get any key input from keyboard to restart game.

Link to Video Clip : <https://www.youtube.com/watch?v=kaEW10HZOoU>



```
while (1)
{
    is_game_over = 0;
    disp_start_scene();
    disp_map();

    while(!is_game_over) {
        if(frame%10000 == 0) {
            player_update(key_input);
            key_input = 0;
        }
        if(frame == frame_rate) {
            zombie_update();
            score_update();
            frame = 0;
        }
        frame++;
    }
    gameOver();
}
```

