GP106 Computing Project Flowchart

Group - B21
Semester - 02
Date - 2024/05/25

Team Members

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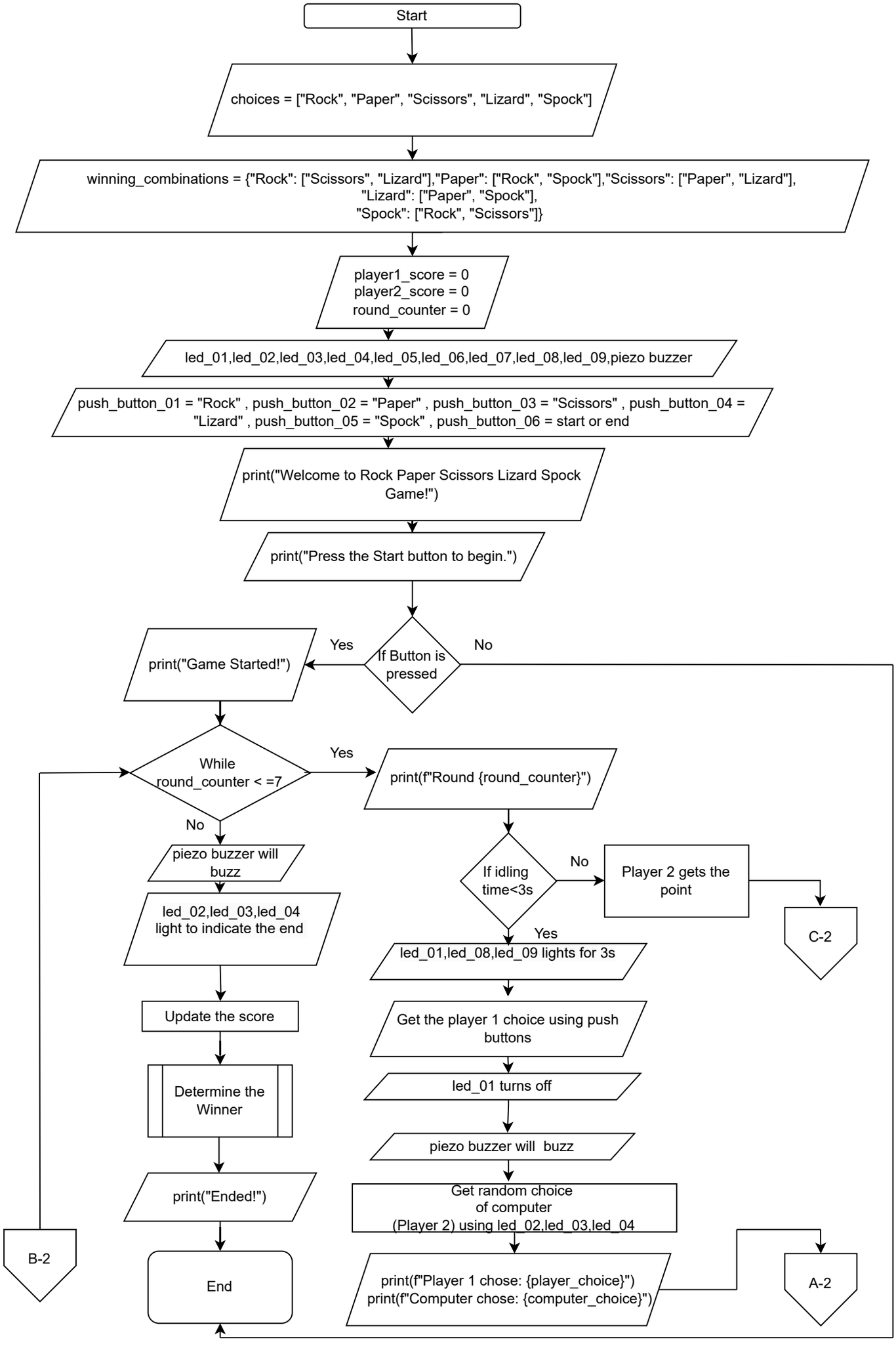
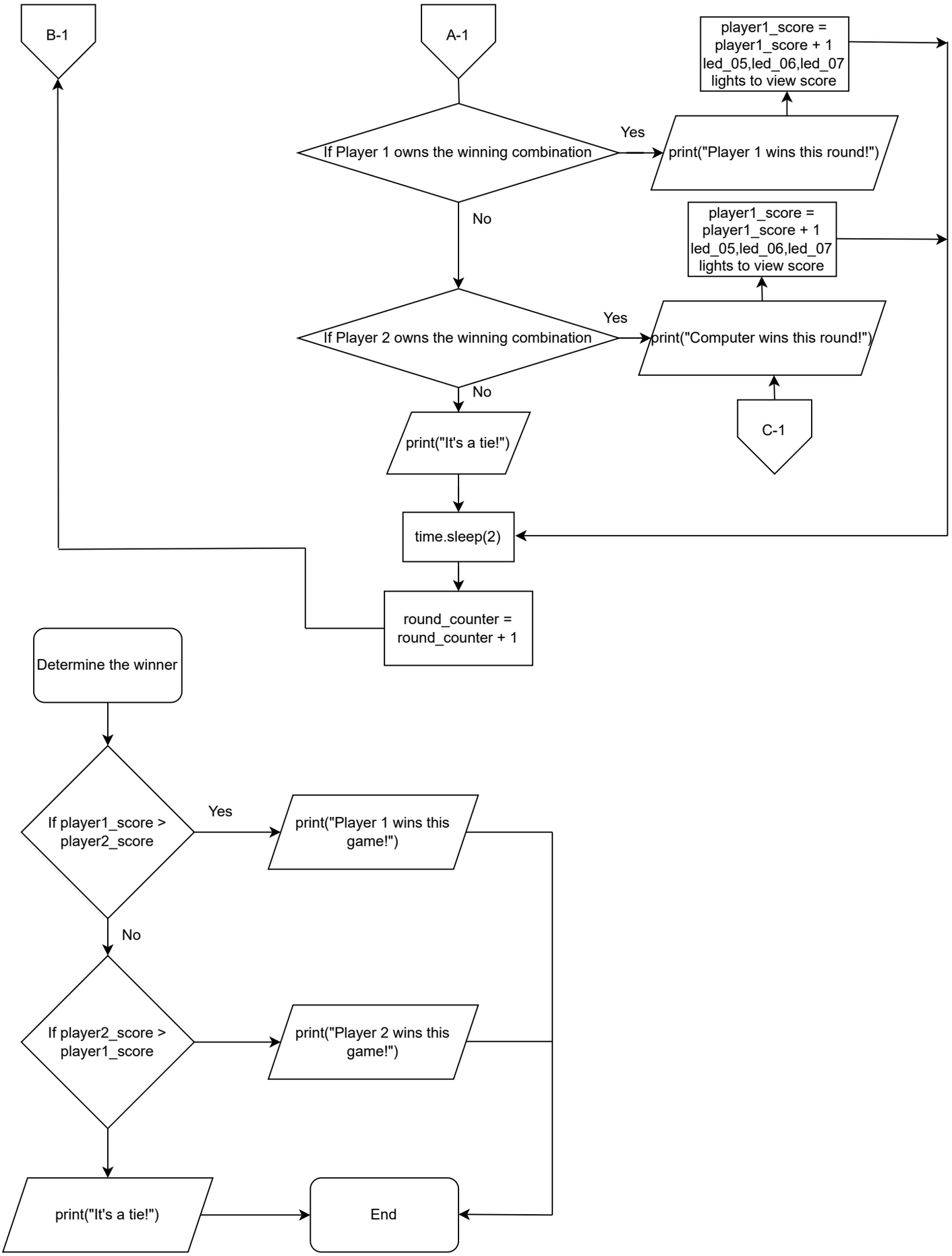

Start
choices = ["Rock", "Paper", "Scissors", "Lizard", "Spock"]
winning_combinations = {"Rock": ["Scissors", "Lizard"],"Paper": ["Rock", "Spock"],"Scissors": ["Paper", "Lizard"],
"Lizard": ["Paper", "Spock"],
"Spock": ["Rock", "Scissors"]}
player1_score = 0
player2_score = 0
round_counter = 0
led_01,led_02,led_03,led_04,led_05,led_06,led_07,led_08,led_09,piezo buzzer
push_button_01 = "Rock" , push_button_02 = "Paper" , push_button_03 = "Scissors" , push_button_04 = "Lizard" , push_button_05 = "Spock" , push_button_06 = start or end
print("Welcome to Rock Paper Scissors Lizard Spock Game!")
print("Press the Start button to begin.")
If Button is pressed
Yes
No
print("Game Started!")
While round_counter < =7
Yes
No
print(f"Round {round_counter}")
piezo buzzer will buzz
led_02,led_03,led_04 light to indicate the end
Update the score
Determine the Winner
print("Ended!")
End
B-2
If idling time<3s
No
Player 2 gets the point
C-2
Yes
led_01,led_08,led_09 lights for 3s
Get the player 1 choice using push buttons
led_01 turns off
piezo buzzer will buzz
Get random choice of computer (Player 2) using led_02,led_03,led_04
print(f"Player 1 chose: {player_choice}")
print(f"Computer chose: {computer_choice}")
A-2


B-1
A-1
player1_score = player1_score + 1
led_05,led_06,led_07 lights to view score
If Player 1 owns the winning combination
Yes
print("Player 1 wins this round!")
No
player1_score = player1_score + 1
led_05,led_06,led_07 lights to view score
If Player 2 owns the winning combination
Yes
print("Computer wins this round!")
No
C-1
print("It's a tie!")
time.sleep(2)
round_counter = round_counter + 1
Determine the winner
If player1_score > player2_score
Yes
print("Player 1 wins this game!")
No
If player2_score > player1_score
print("Player 2 wins this game!")
print("It's a tie!")
End

Description

1) choices = ["Rock", "Paper", "Scissors", "Lizard", "Spock"] – There are only 5 choices in the game

2) winning_combinations = {"Rock": ["Scissors", "Lizard"],"Paper": ["Rock", "Spock"],"Scissors": ["Paper", "Lizard"], "Lizard": ["Paper", "Spock"], "Spock": ["Rock", "Scissors"]}

So these are the winning combinations.

For an example if player 1's choice is Scissors or Lizard, player 2 can only win if the choice is Rock

3) player1_score and player2_score – Respectively Player 1's score and Player 2's score

4) round_counter – Variable to increase the round's number after every round is finished

5) Input of the components which will be used in this project - led_01,led_02,led_03,led_04,led_05,led_06,led_07,led_08,led_09,led_10,piezo buzzer

6) push_button_01 = "Rock" , push_button_02 = "Paper" , push_button_03 = "Scissors" , push_button_04 = "Lizard" , push_button_05 = "Spock" , push_button_06 = start or end

Use of push buttons for choices and start/end

7) print(f"Player 1 chose: {player_choice}") print(f"Computer chose: {computer_choice}") – To showcase the respective choices of player 1 and player 2

8) If Player 1 owns the winning combination

If Player 2 owns the winning combination – As I mentioned earlier player 1 and player 2 will win according to their choices

9) time.sleep(2) – 2s time between the finished round and new round

10) round_counter = round_counter + 1 - To increase the value of the variable, round_counter after every round finishes