

# PROJECT REPORT

This is a socket based multiplayer quiz based on Python

## Instructions

1. Go to the directory where the files **server.py** and **client.py** are present.
2. Run this command on your terminal **python3 server.py**
3. Open three more terminals (three users) and run the following command **python3 client.py** and continue.

**Note: Do not use Windows.**

**Enter values only when the prompts appear and enter only once at a time**

## Project Overview

- There are three players in the game.
- The host (server) has a dictionary of 50 simple addition questions and correct answers with him.
- A question chosen among the given set of questions and then sends to all the three players.
- The players press the buzzer by pressing any key on the keyboard. The first one to press the buzzer is given chance to answer the question. The users have 10 sec to press the buzzer.

- The user that presses the buzzer has 10 sec to answer the question. If the answer is correct then he is awarded a point.
- Else a -0.5 points are awarded.
- The host then proceeds with the next question. The game stops when the player gets 5 points and then he is declared the winner.
- If none of the users press the buzzer the server moves on to the next question.
- If the sever runs out of questions then the player with maximum scores wins.

## **Project Description**

- The project into two phases, the client phase and the server phase.
- First the server waits for a connection from the three clients and then proceeds with the questions only if all the three participants have joined.
- Each of them has been assigned as Player1, Player 2 and Player 3 with respect to the time of their participation.
- Then the server broadcasts the questions from the stored set of questions in the dictionary.
- It then waits for buzzer to be pressed from any one of the users and then waits for the user to give some input. If the

user gives a correct answer his score is incremented accordingly and reduced if it is a wrong answer.

- It keeps on doing the process until a player scores 5 points or the server runs out of questions.
- Client phase: Here the client is running a loop where it waits for information from the server and responds accordingly.
- Modules used in the scripts:
  - socket
  - time
  - select
  - sys
  - os
  - termios
- The server runs on the host IP address and the port 5555.
- The server and client make use of select function for their inputs which have a timeout parameter of 10 sec.
- `time.sleep()` commands have been used at various places to force all the clients to move forward in sync.

## **Bibliography**

<https://www.geeksforgeeks.org/simple-chat-room-using-python/>

<https://www.youtube.com/watch?v=6jteAOmdsYg&list=PLhTjy8cBISerYuLZUvVOYsR1giva2payF>

<https://docs.python.org/3/library/socket.html>

<https://docs.python.org/3/library/select.html>