

Computer Networks

Project Report

-By Utkarsh padariya
(IMT2019089)

Instructions to run files:

- Use python3 to run file
eg.
python3 server.py
python3 client.py
- No of player can be decided by server (max=5)
- Run client.py in that many terminals.

Assumptions:

- Server should not be closed in between the game.
- If some of the clients are disconnected then remaining clients can still continue playing the game.
- If the all questions in question list are asked then it no one wins the game and final scores are sent to clients
- Except 0 client can press any key and enter or just press enter for buzzer

Description of the code:

Modules used:

- socket – to build sockets for network programing .
- threading – to run multiple function parallely at same time.
- random – to take random question from the question list.
- time – to wait by making program sleep , used to count time.

- sys,select – used to take input within specific time.
- termios – use to remove if any,input buzzer.

Flow of game:

- First set of instruction will be given to client when they run client.py
- Then they have to submit their game name i.e user name .
- After every player have submitted their names server will start the game.
- Every player will have 10 sec to press buzzer .
- If buzzer is pressed by one of the client then immediately he will have to give answer within 10 seconds while ohter clients will wait for that time.
- Then if answer is given it will be sent to sever for evaluation.
- After every question, current scores of every client will be displayed.
- Then server will check if some client have scores greater the or equal to 5 or question bank is over, to check if game if over or not.

key features:

- If by mistake user types something and press enter this will not affect the other code . As all input and output buffer are being flushed.
- For every part of game a function is made and server will send a next byte which will tell client side program to run which function this. will make sure code runs properly.
- If one client is disconnected other client can still play the game.
- There are no unnecessary wait in the game.

Knowledge gained:

- Learned how network programing works.
- Learned some new concepts on select threading and socket programming.