

# QUIZZ

by

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# Application Name: QUIZZ

## Description:

Quizz is a free online exam platform that aims to provide the lecturer with an easy-to-use multiple-choice exam publisher. The lecturer can host their own exam room on QUIZZ and invite the student to join the exam easily by sending *the room id*. The exam summary and room management page are also provided for the lecturer.

## Features:

- Quiz maker tool

QUIZZ offers a *quiz maker* tool to help the lecturer create their exam on the site. The lecturer can write the question and answer choices with it. The number of problems and the exam duration also are configurable.

- 2 choices and 4 choices problems

Each problem in the exam could be either 2 choices or 4 choices as the lecturer wanted. In one exam, the problem could be the mixing of both 2 choices problems and 4 choices problems.

- Quick exam score report

The total score will be calculated and shown right after the student finished the exam (or time's up)

- Live timer

QUIZZ offers a timer during the time that a student is doing an exam. Therefore students don't need to worry about the time.

The timer is for individuals and depends only on the time that the student starts the exam, so the student can do the exam whenever they like.

- Time's up Auto-Submission

When the time is up, the exam will be submitted automatically

- Easy evaluation

The lecturer (the room owner) can check the result of all students that participated in his or her exam room. The scores will be shown on the room result page

- Easy joining exam room

Students do not need to log in before joining the exam room. They just need to enter their name before joining the room

- Works well on many devices

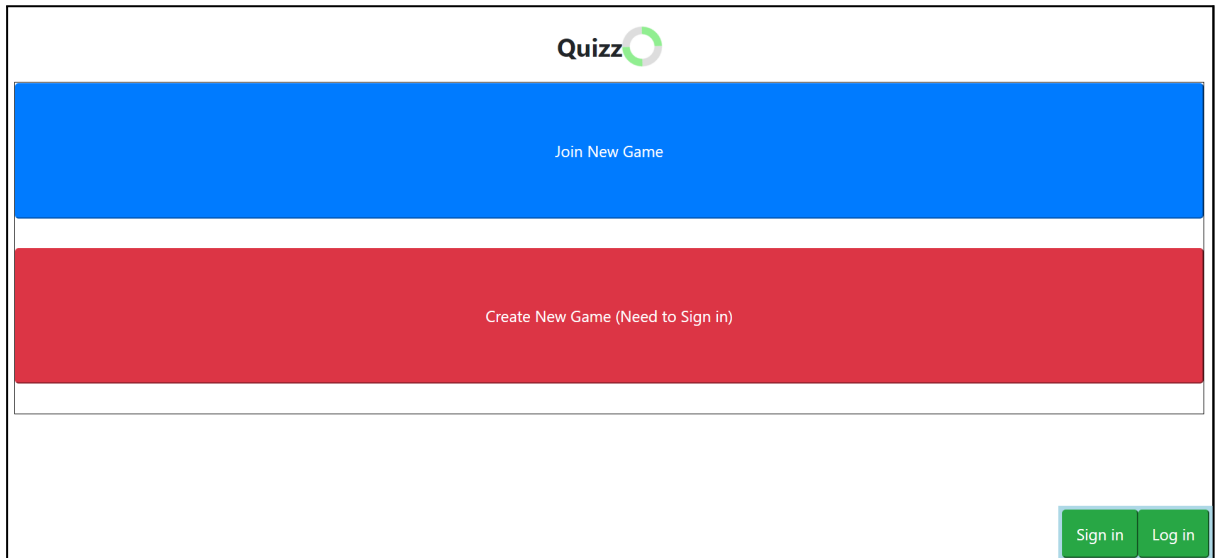
The interface works well on mobile, tablet, and desktop browser

**URL:** <https://com-eng-ess-project-c80a6.web.app/>

## How to use the application

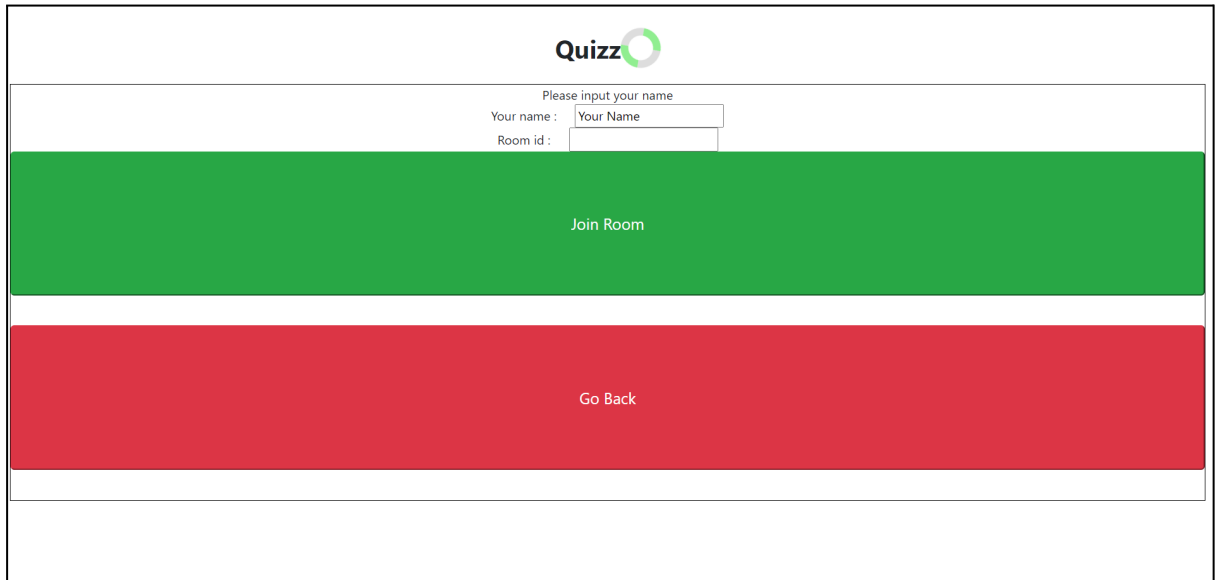
For students:

- You can enter the exam room or quiz room by clicking on “Join New Game” button



The screenshot shows the Quizz application interface. At the top center is the Quizz logo. Below it is a large blue button labeled "Join New Game". Underneath the blue button is a large red button labeled "Create New Game (Need to Sign in)". In the bottom right corner, there are two green buttons labeled "Sign in" and "Log in".

- Enter the name that can identify yourself.



The screenshot shows the Quizz application interface for joining a room. At the top center is the Quizz logo. Below it is a form with the text "Please input your name" and "Your name :". There is a text input field next to "Your name :" containing the text "Your Name". Below this is a text input field for "Room id :". Underneath the form is a large green button labeled "Join Room". Below the green button is a large red button labeled "Go Back".

- Input the room id that you received from your instructor.

**Quizz**

Please input room id to join

Your name :

Room id :

Join Room

Go Back

- Click on join room and enjoy the test.

**Quizz**

Current Use : 0 Minute(s) 9 Second  
Time Limit = 0 Minute(s) 54 Second

**Question Number 3 / 5 : เลือก**

ตอบข้อนี้

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- After Complete the test you will know your result

com-eng-ess-project-c80a6.web.app บอกว่า

Your score : 5

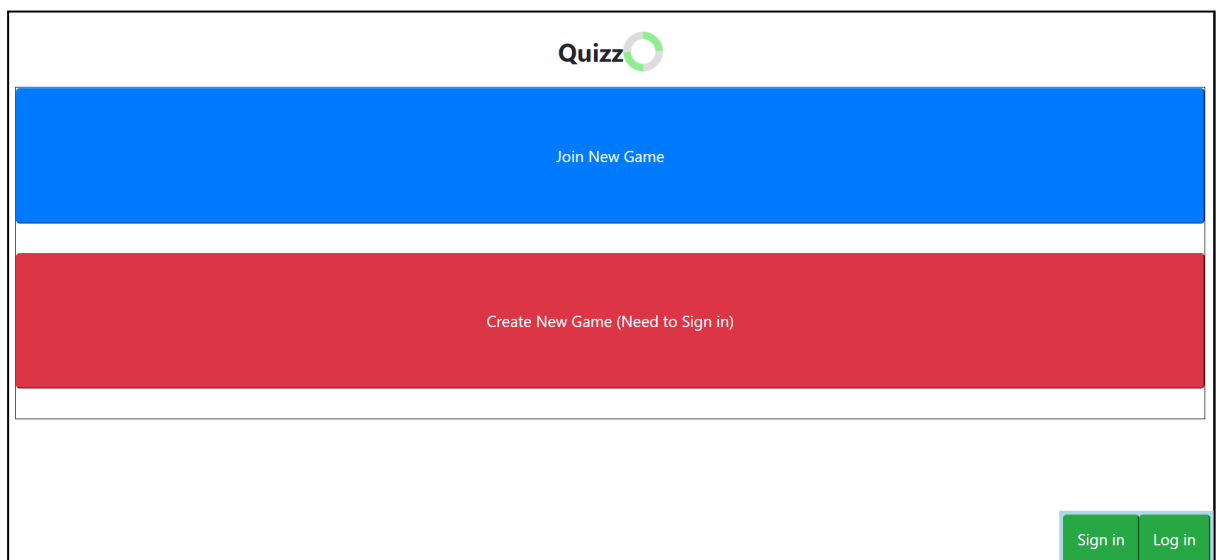
ตกลง

- Even though you didn't submit your answer in time your answer still be graded



For teachers:

1. To create a Quiz
  - You can create your room by clicking 'Create New Game' button (need to sign in before doing this)



- Input the number of questions, then press 'Next'

Quizz

Number of Question

Next

Go Back

- Choose how many choices you want (2 or 4)

Quizz

Question Number 1

Choose your choice

4 Choice

2 Choice

Go Back

- Input your question, choices, and an answer. Then, press 'Next'

Quizz

Question Number 1

4 Choice

Question

Choice 1

Choice 2

Choice 3

Choice 4

Answer

--Choose Your Answer--

Choice 1

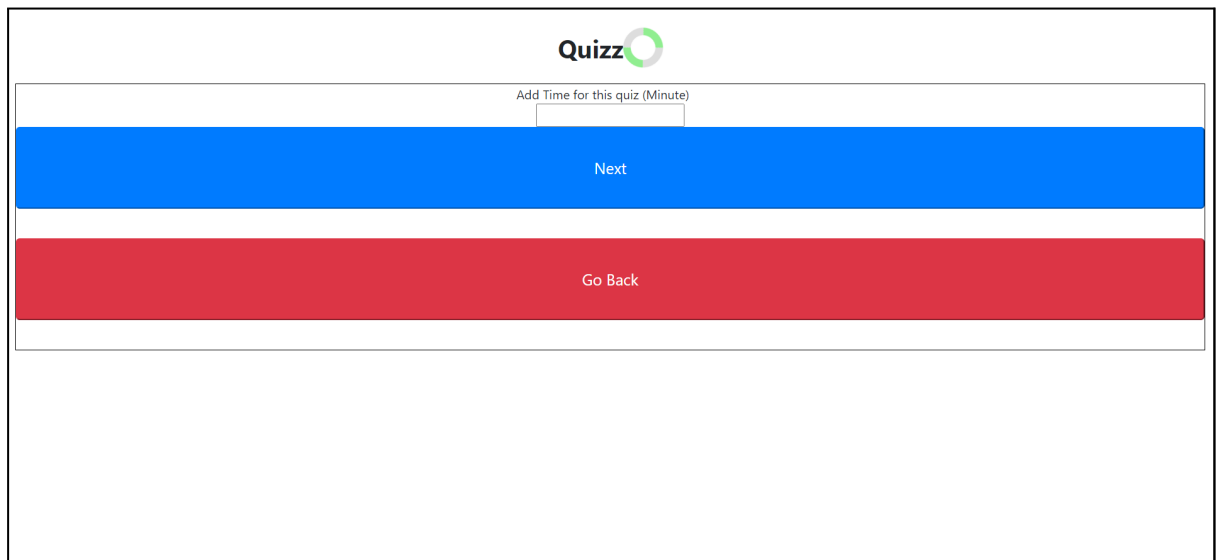
Choice 2

Choice 3

Choice 4


Go Back

- Add time for this quiz. then, press ‘Next’



The image shows a web interface for a quiz. At the top, there is a logo that says "Quizz" with a green circular icon. Below the logo, there is a text input field labeled "Add Time for this quiz (Minute)". Underneath the input field, there are two large, horizontal buttons. The top button is blue and labeled "Next". The bottom button is red and labeled "Go Back".

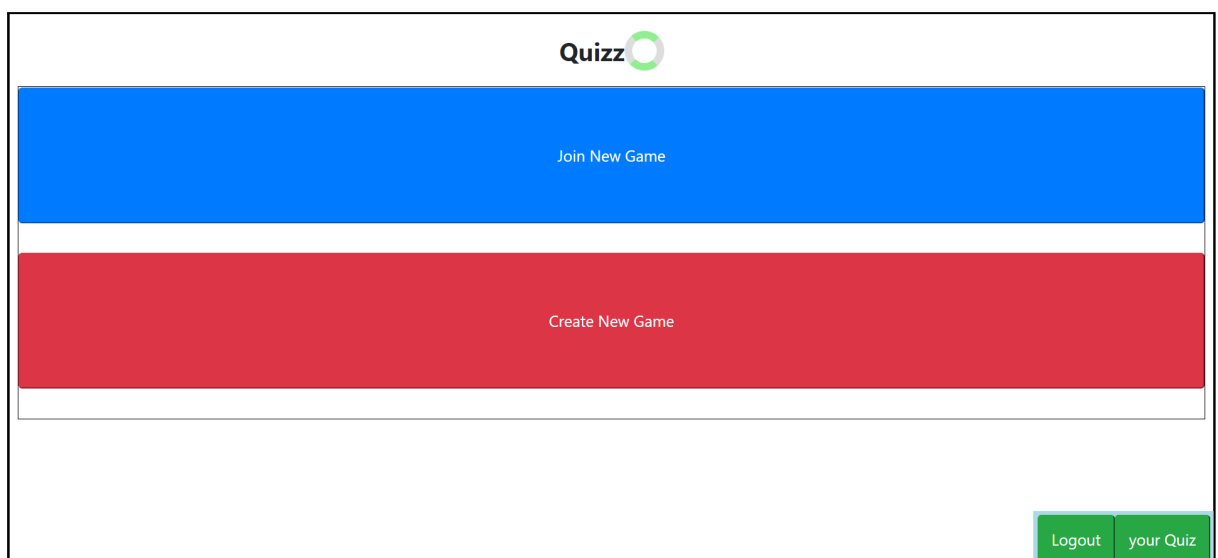
- You will receive the room id which is used for entering the room.



The image shows a notification message in a light gray box. The text inside the box reads: "com-eng-ess-project-c80a6.web.app says" followed by "Room RR3990LyufFjPMgi6OUn has been create". At the bottom right of the box, there is a blue button labeled "OK".

## 2. To check the result


- Press ‘your Quiz’ button



The image shows a web interface for a quiz. At the top, there is a logo that says "Quizz" with a green circular icon. Below the logo, there are two large, horizontal buttons. The top button is blue and labeled "Join New Game". The bottom button is red and labeled "Create New Game". At the bottom right of the interface, there are two green buttons: "Logout" and "your Quiz".



- You will see your room, press 'Result'


Quizz

Room 1 : RR3990LyuffjPMgi6OUn

Delete

Result

- You will see the score for each user.  
(name ==> score)

Quizz

User 1 : m ==> 1  
User 2 : jack ==> 0

# Basic requirement

## Single-page application

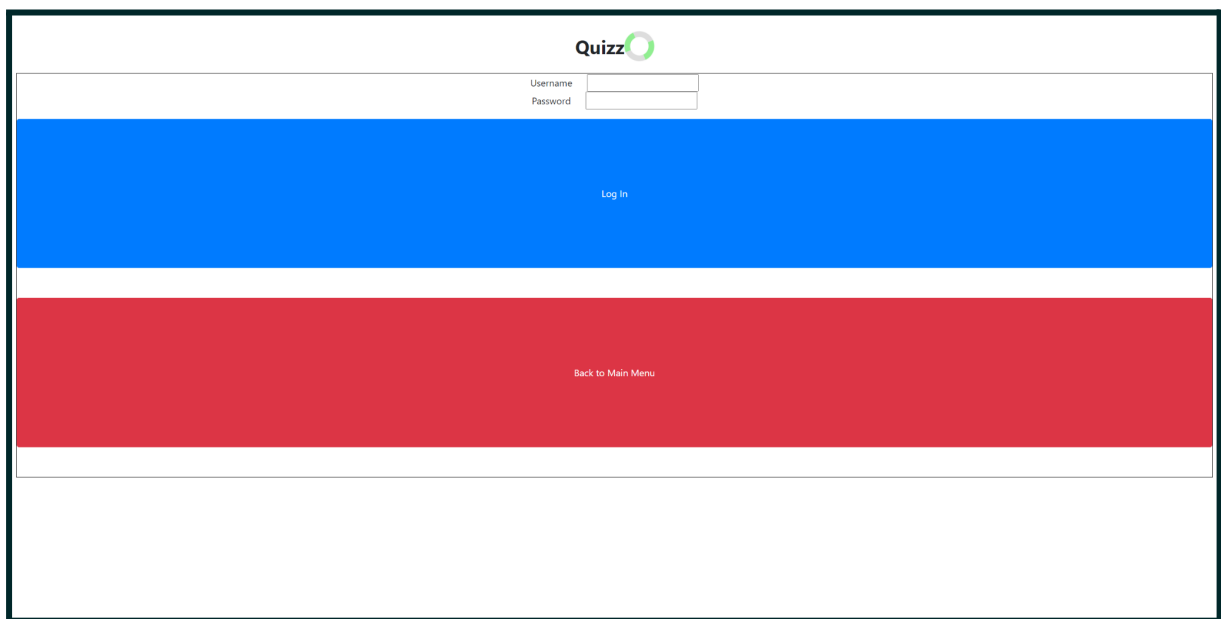
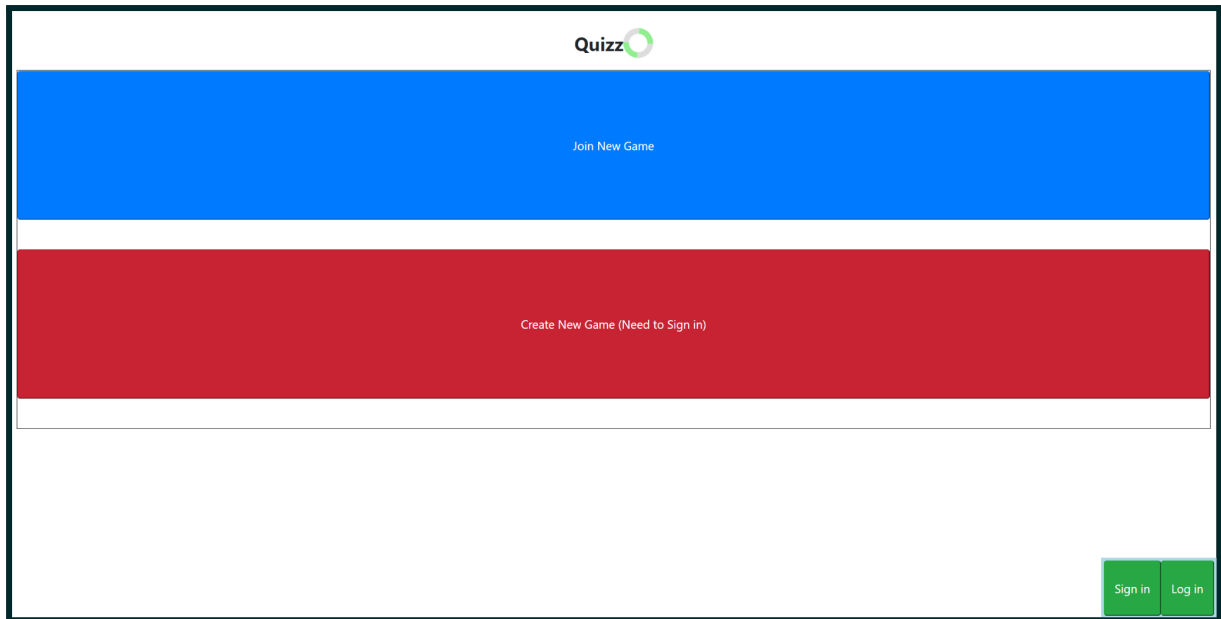
Quizz was developed to be a single-page website. We change the main component with Javascript by clearing main to empty string and replace with our new page. for example, clearQA() does replace main's HTML with afterSubmit

```
const afterSubmit = `
    <div id = "currentQuest"></div>
    <select id="types" onchange="onChangeType(this)" selected = "">
      <option value="">Choose your choice</option>
      <option value="4choice">4 Choice</option>
      <option value="2choice">2 Choice</option>
    </select>
    <div id = "choice"></div>
    <div id = "result"></div>
    <button class="btn-lg btn-primary" style = "..." id="submit" onclick = "submitQA()">Next</button>
    <button class="btn-lg btn-danger" style = "..." id="back" onclick = "toLoginMenu()">Go Back</button>
  `;
window.submitQuestion = submitQuestion;

//call when submit number of question
function submitQuestion(){
  let num = document.getElementById( elementId: "question").value;
  numQuestion = Number(num);
  if (numQuestion <= 0) {
    document.getElementById( elementId: "result").innerText = "You need to input more than 0";
    return;
  }
  clearQA();
}
```

```
function clearQA(){
  let Main = document.getElementById( elementId: "Main");
  Main.innerHTML = afterSubmit;
  document.getElementById( elementId: "currentQuest").innerText = "Question Number " + currentQuestion;
}
```

After user press the button or select the option type from main html, we use the onclick function to set a new page due to the value from the user's input, such as when user clicked on Login the main part was immediately change to login page



Others than main part will stay the same ( Quizizz and logo )

### **Quizizz helps online learning**

Quizizz is made for educational purpose. As it is, Quizizz is the online exam platform. User can be teacher or student.

Quizz is 100% online, so user must use computer or mobile phone to connect

## Front-ended part

Our web components are pure html and bootstrap button which are simple and designed for friendly user interface with Javascript function.

## Back-ended part

In the backended side, we use Firebase to store data and use Firestore library to access data from document. We also use additional function called 'arrayUnion', 'arrayRemove' and 'setDoc' to update data in firebase. for example, we use setDoc in pushScore function to update score result to firebase so the instructor will see the students' score after they have done the test.

```
import {
  addDoc,
  collection,
  deleteDoc,
  doc,
  getDoc,
  getDocs,
  getFirestore,
  updateDoc,
  arrayUnion,
  arrayRemove,
  setDoc
} from 'https://www.gstatic.com/firebasejs/9.6.8/firebase-firestore.js';
```

In conclusion, We use firestore to remember username and password, user's exam room, exam's result for each room, the exam properties etc. We query these data for user when user

click on the button and activate back-ended Javascript, for example, when room's owner click on 'Your quiz' and click some room's result, the page will show the list of examiner's score.

```
window.result = result;

async function result(ref){
  // console.log(ref)
  const AllroomRef = doc(db, "AllRoom" ,ref);
  let allRoomToShow = (await getDoc( AllroomRef)).data()['result'];
  // console.log(allRoomToShow.data())
  // const user = doc(db,'User',mainControl.id);
  // let data = await getDoc(doc(db,'User',mainControl.id));

  let Main = document.getElementById( 'elementId: "Main"');
  Main.innerHTML = "";

  for (let i = 0 ; i < Object.keys(allRoomToShow).length ; i++){
    let line = document.createElement( tagName: "div");
    line.id = allRoomToShow[i][0];
    // console.log(allRoomToShow[i])

    let text = document.createElement( tagName: "span");
    text.innerHTML = 'User '+(i+1) + " : " + allRoomToShow[i][0]+" " + " ==> " + allRoomToShow[i][1] ;
    text.style.fontSize = "32px";

    let btnzone = document.createElement( tagName: "div");
    btnzone.style.display = "inline-block";
    btnzone.style.position = "absolute";
    btnzone.style.left = "85%";

    let result = document.createElement( tagName: "button");
    result.className = "btn-lg btn-success";
    result.setAttribute( qualifiedName: "onClick", {value: "(" + allRoomToShow[i][0] + "result")} );
    result.style.width = "auto";
    result.style.height = "50px";
    result.textContent = "Result";

    // btnzone.appendChild(deleteBtn);
    btnzone.appendChild(result);

    line.appendChild(text);
    // line.appendChild(btnzone);

    Main.appendChild(line);

  }

  Main.innerHTML += backToShow;
```

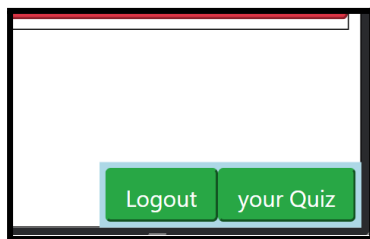
This function try to show you to list of score of user that have done the exam.

# Challenging requirement

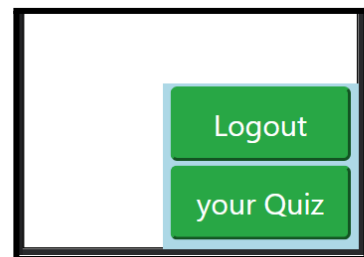
## Responsive

Most of the elements in this project were configured with a size relative to the screen size, such as buttons, divs, padding, and margin. Thus, those elements will look nice and behave properly in every screen size.

```
103
104 ∨ @media only screen and (max-width: 300px) {
105 ∨   .user-controller {
106     flex-direction: column;
107     height: 20%;
108   }
109 }
110
```



wide screen  
(> 300px)



small screen  
(< 300px)

In addition, a breakpoint was set at 300px screen width to adjust the user-controller buttons to align vertically when the screen is too small to align horizontally.

## Project planation

We planned to use Single-page website to be an exam platform. **Werapat** has roles to design a database, do firebase parts and main logic design. **Chakkrit** has a responsibility in part of pure html design. **Napat** has a major role to do backended part, retrieve and set data to the database. **Natthaphon** has responsibility in the css and responsive part.

## Project Execution

Plan/Weeks	Week1	Week2	Week3	Week4
Logic Design	✓			
Html Part		✓	✓	
CSS Part		✓	✓	
Responsive Part				✓