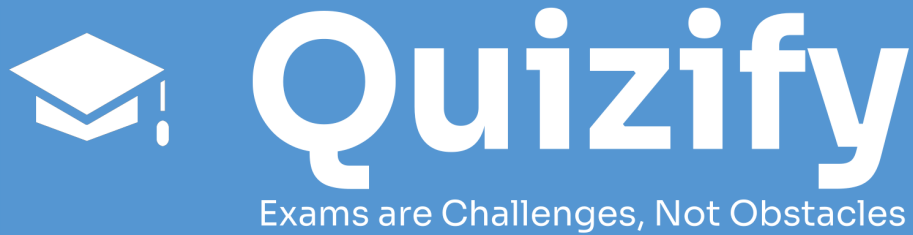**LKS Kota Jakarta 2025 – IT Software Solutions for Business (Desktop)**

Quizify

Quizify is a simple and efficient online quiz application designed to improve the quiz experience. It replaces the traditional paper-based method, where answers need to be manually checked by an administrator.

With **Quizify**, registered users can create and design their own quizzes, while students can take the quizzes. The platform also provides useful quiz reports, showing the average quiz score, average time taken to complete the quiz, and the number of correct and incorrect answers from participants. This makes it easier for users to track performance and improve their skills.

Content

1. Quizify.pdf
2. Database-Quizify.sql
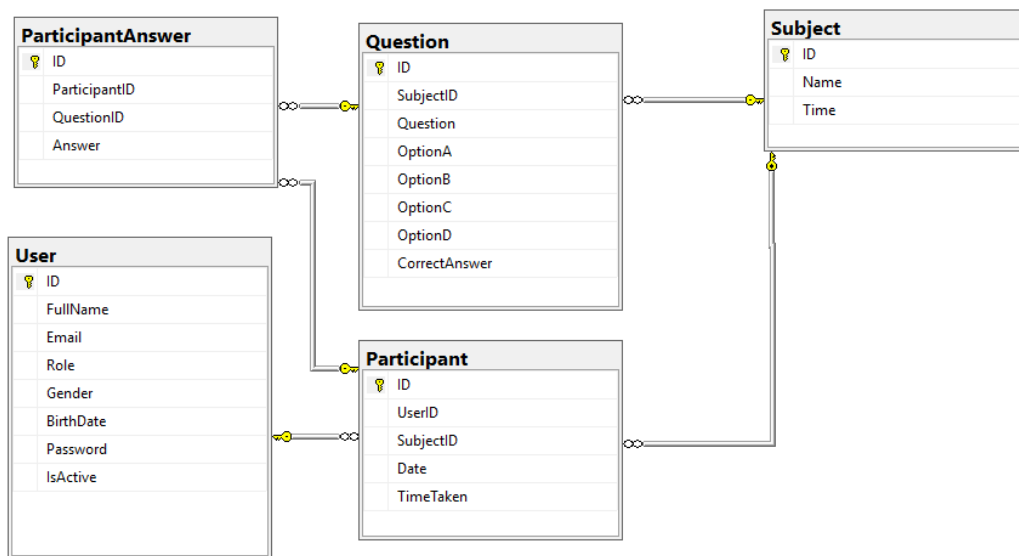3. Resoure

Instructions for Competitors

1. Import Database

Import the database from the database script (.sql) that is already provided to you. This is the only database that will connect to your application. You are prohitibed to perform any changes on the database schema.

Responsibilities

Description	Tasks
Project criteria	✓ The project name must be in format "**Desktop_[XX]**" where XX is your PC number. ✓ Time management is a crucial thing for this project. So, manage the given time wisely and submit all your works on time.
Application User Interface	✓ You are allowed to change some components as long as it doesn't interfere the business logic and flow. ✓ There are no bonus marks for design (features > design). ✓ Provides scrollbar to user when the contents shown doesn't conveniently fit to the application ✓ You must follow all existing components as designed and **without missing a single thing**, whether it's labels, buttons or images. ✓ There will be a point deduction if any column in the grid is **missing** or **incorrect**.
Validation and error messages	✓ The application must runs well without any crashes. Display useful error message to the users when needed. ✓ Validation for every input process is a must. ✓ Analyze the required validation that is needed in the application. Especially the validations that are not explicitly stated in this project description. This is one of the marking criteria for your analysis result. ✓ Specific validation will be included in the project description.

Entity Relationship Diagram

To make it easier for you to understand the database structure, Database Designers from Quizify has provided you an Entity-Relationship Diagram (ERD). This diagram will explain the concept and representation of the data model that is used in the database.

1. Login Form

Figure 1. Login Form

This is the first form that will be used by the user to login to the application. Registered users can login to the system with their email and password combination.

- User can **login** to the application with their **email** and **password**.
    - If the **combination exists** in the database, the user will be **directed** to the **main form** to the application.
    - If the **combination doesn't exists** in the database, show the message **"Your credentials invalid, please try again."**.
    - If the user account is not active show message **"Your account is not active, please contact admin."**
- Put a **toggle** for users to **show the password** that they typed.
- New users can **register** themselves by clicking the **"Register"** link below.
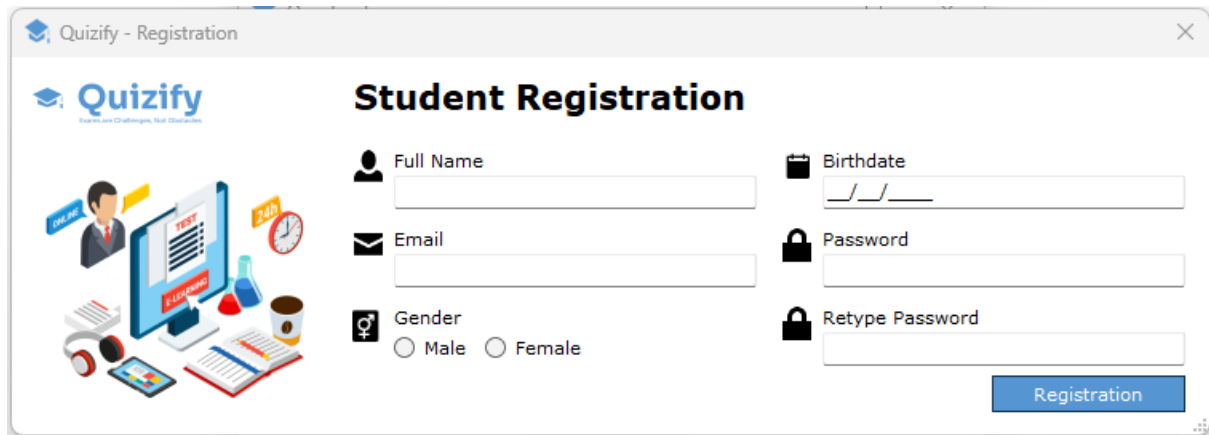
2. Register New Student Form

Figure 2. Register Form

In this form, user can register an account by filling some informations.

- **All field** must be **filled**.
- **Email** must be unique (Must **not registered to the database** before).
- **Email** validation.
- **When** user **successfully registered** their account, show message **"Registration successfully, admin will activate your account soon."** and **direct** user to the **login form.**

3. Main Form

Figure 3. Main Form (1)

Figure 4. Main Form (2)

This is **main form**. In this form, there is a navigation menu that is used to **display sub-forms** within it.

- There is a menu **"Arrow Right"** button that functions to collapse and **expand the side navigation menu**.
- The side navigation menu consists of:
  - Dashboard
  - Questions
  - Results
  - Logout
- **When** user **clicks** on one of the **navigation menu items**, the corresponding form **selected** by the user will **appear on the side**.
- **When** user **clicks the logout button**, they will be **redirected** to the **login form**.
- **When** user **closes** this **form**, the **application** will be **closed**.

4. Admin Dashboard Form

Figure 5. Admin Dasboard Form

This form displays a list of **users**, allows the admin to manage user **status**, and shows the **exam results** of **all users**.

- **Display** the **current date** and **time**.
- Student Control
  - **Show** all **user** with role **"Student".**
    - User
    - Gender
    - BirthDate
    - IsActive
  - If the user is not active, set the background to **"Salmon"** color. Otherwise, set it to the **default background**.
  - When the user **clicks** on the **DataGridView**, enable the **button**.
    - **When** the user is not active, the **button text** displays **"IsActive"**. If the user **clicks the button**, update the **status** in the **database**.
    - **When** the user is active**,** the **button text** changes to **"InActive".** If the user **clicks the button**, update the **status** in the **database**.
- Student Results
  - **Display** the **user's results** for **today**.
    - User
    - Subject
    - Date
    - TimeTaken
    - Answered
    - Unanswered
  - **Display** the number of **answered** and **unanswered questions**. Set the background color to **"Forest Green"** for **answered** questions and **"Salmon"** for **unanswered questions**.

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5.   Admin Management Questions Form

Figure 6. Admin Questions Form

This form displays **all questions** from the available **subjects** and allows for question management, including **adding**, **editing**, and **deleting** questions.

- **Show** all of **subjects available** in the **database**.
  - Question
  - OptionA
  - OptionB
  - OptionC
  - OptionD
  - CorrectAnswer
  - **When** user clicked (✏) icon, **redirect the user** to the **edit form.**
  - **When** user clicked (🗑) icon , display a message confirmation **"Are you sure you want to delete the question?"**. If the user selects **"Yes"**, **delete** the data from the database; if not, **do nothing**.
- **Display** the **question detail data** for the **selected subject**.
- **When** user **clicked** the **"Add"** button, **redirect the user** to the **add form.**

6. Add / Edit Form

Figure 7. Add / Edit Form (1)

Figure 8. Add / Edit Form (2)

This form is used to manage questions for the subject that was previously selected. You can edit or add new questions.

- **All field** must be **filled**.
- By **default all fields** is **empty,** but if the form is in **"Edit"** mode, load the data according to the **selected question**.
- **When** the **"Question Image"** is clicked, the **question image** will **change immediately**.
- **Put** a **toggle** to switch **the option** from **text** to **image**.
- If the **image option** is clicked, the **image** will **change immediately**.
- **When** the **"Cancel"** button is clicked, it will return to the **previous form**.
- **When** the **"Save"** button is clicked, the **data will be sent** to the **database**, and the **form** will return to the **previous form** and **refresh** the data.

7.   Admin Result Form

Figure 9. Admin Result Form

Result form to view the results of all students who completed the **Question**.

- **Display** the list of **subjects** available in the **database**.
- **Display** the question detail data for the **selected subject and date**.
    - User
    - TimeTaken
    - Answered
    - Unanswered
    - Grade
- If the **grade** is **below** 75, set the background to **"Salmon"**. If the **grade** is 75 or **above**, set the background to **"Forest Green"**.
- You can use this formula to calculate the correct percentage:

$$Percentage = \frac{correct\ answer\ count}{total\ questions\ count} \times 100\%$$

8.   Student Dashboard Form

Figure 10. Student Dashboard Form (1)

Figure 11. Student Dashboard Form (2)

This form displays all the question that the user can complete.
- **Show** the user **full name**.
- **Show** the **current date and time**.
- **Display** all exam subjects for today that have **not been completed**.
  - Subject
  - Time
  - Number of Questions
  - When the user **clicks the "Start" button**, display a **confirmation** popup to **start**. If they **click "Yes"**, they will be **redirected** to the **question form**; if **"No"** do **nothing**.

Don't forget to add scrollbars when the containers can't fit all the subjects.
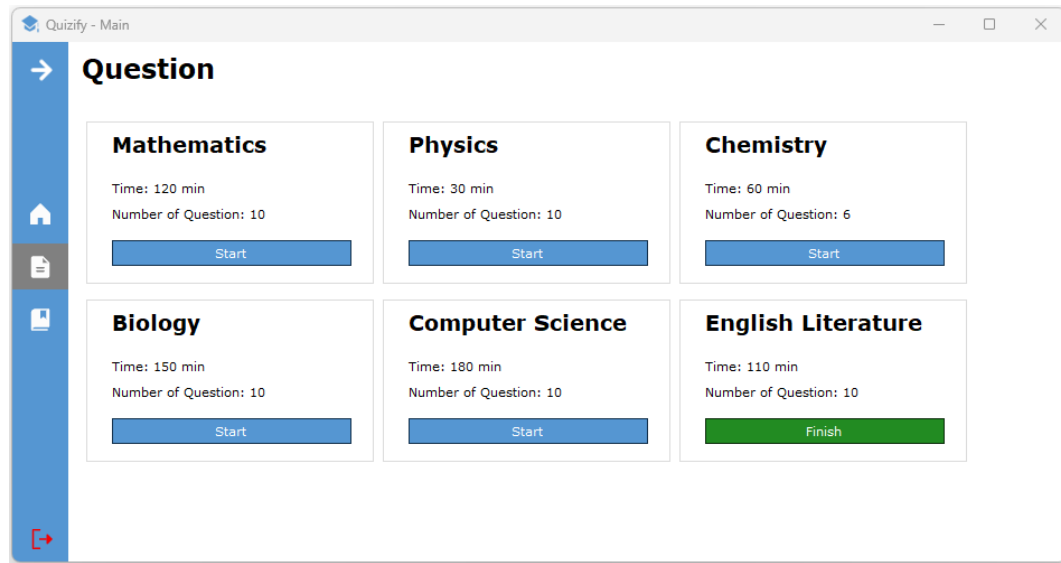
9.   Student Question Form

Figure 12. Student Question Form

This form displays all the question available in the database.

- **Show** all **question** that will be included to the subject in the table below.
    - Subject
    - Time
    - Number of Questions
    - When the user **clicks the "Start" button**, display a **confirmation** popup to **start**. If they **click "Yes"**, they will be **redirected** to the **question form**; if **"No"** do **nothing**.

    Don't forget to add scrollbars when the containers can't fit all the question.
- If the user **has completed the question**, set the **button text** to **"Finish"** and the background color to **"Forest Green"**.
    - **When** the user **clicks the "Finish" button**, display a **popup** saying **"You have finished this question.".**

10.   Question Session Form

Figure 13. Question Session Form (1)

Figure 14. Question Session Form (2)

Figure 15. Question Session Form (3)

This is the form for the user to participate in the question and answer all the questions. There are some navigations that the participant can use to navigate through questions.

- **Show** subject **name.**
- **Show** current question number.
- **Display** the **countdown timer** for the subject.

- o **Automatically send** to the **database when** the **countdown expires** and **redirect** him/her to the **result form**.
- **Show** the **question.**
  - o **Put** the **question text** and the **available answer options right below it**.
  - o By **default**, there will be no **selected answer for all the questions**.
  - o But **don't forget** when **user navigated** to **the question that have already been answered before**, you should **display** the **selected answer** that has been **selected by the participant**.
- **Show** list **question button number**.
  - o By **default**, the **question list** for the **button number** is **invisible**.
  - o If user **click icon** (⚏), **visible questions list** for **button number .**
    - ▪ **Place buttons** where participant **can click** to **navigate** directly to **the question**.
    - ▪ **Each row** of the buttons **can only have maximum five buttons**.
      So, for example, there are 7 questions in a quiz.
      There will be 2 rows that consists of 7 buttons, where:
      - ❖ Row 1 = 5 buttons
      - ❖ Row 2 = 2 buttons

    Don't forget to add scrollbars when the containers can't fit all the buttons.
  - o **Differentiate** between **unanswered question** and the **answered one**. You can differentiate them by **giving them different background colours**.
    - ▪ Unanswered : light gray
    - ▪ Answered : green
- **Provide** the **navigation button** at the **bottom of the question**.
  - o **Previous button** that will help the participant to **navigate to the previous question**.
    - ▪ **Hide** the **previous button** when participant is currently **on the first question**.
  - o **Next button** that will help the participant to **navigate to the next question**.
    - ▪ **Change the next button** into **finish button** when participant is **already on the last question**.
  - o **Finish button** that will **save all the answer to the database**.
    - ▪ **Make sure** that **all the questions are already answered** by the participant **before saving it all to the database**.
    - ▪ **After** all the saving **process** is **done**, **direct him/her back** to the **result form**.
- Participants **cannot cancel** the **question** by **simply exiting the form**.
  - o **When** user **click close form** show message **"This form cannot be closed. Please complete the question first!"**.

11. Student Result Form

Figure 16. My Profile Form

This form view the results of user completed the question.

- **Show** the **participant** result.
  - Subject
  - TimeTaken
  - Date
  - Answered
  - Unanswered
  - Grade
- If the **grade** is **below** 75, set the background to **"Salmon"**. If the **grade** is 75 or **above**, set the background to **"Forest Green"**.
- You can use this formula to calculate the correct percentage:

$$Percentage = \frac{correct\ answer\ count}{total\ questions\ count} \times 100\%$$

- Do Your Best -