ISIT307 S1, 2023
Assignment #1
Due: 10:00 pm Sunday 5th February 2023
Marks: 25 marks (25%)

The purpose of this assignment is to create an interactive website by using web forms, manipulating strings and arrays, and validating/handling user input and text files (for storing and retrieving information).

Aims

In this assignment, you will need to develop a website, **"Singapore General Knowledge Quiz",** that generates quizzes to test users' general knowledge of Singapore's history and geography. The website should generate quizzes on two topics: Singapore History and Singapore Geography. It will offer to the users to answer questions and score points.

At the beginning of an attempt, the user should insert the nickname and choose: "Singapore History" or "Singapore Geography". In each attempt, the user starts with 0 points and can have multiple quizzes on the same or different topic.

After the user finishes the quiz, the result with the number of correct and incorrect questions, gathered points from the current quiz ([number of correct questions] * 5 – [number of incorrect questions] * 3), as well as the user's overall points in the current attempt (from all quizzes) should be displayed.

The user should be offered to start a new quiz on the same or another topic. Also, the user should have the option to see the overall scores of all players in the quiz (Leaderboard - cumulative points of all attempts per user), or to "Exit" the quiz.

The 'Leaderboard' should give an option to the user to order the players by their nicknames or greatest score. When the "Exit" option is chosen, the nickname and overall points of the user should be displayed. The option to start a new attempt (by entering the nickname) should also be given.

The questions for the "Singapore History" and "Singapore Geography" topics should contain both multiple-choice questions (each question with at least 4 choices) and short-answer questions (answers are input via the text field).

Every topic should have at least 10 questions in the question pool. In each quiz, 5 questions will be randomly chosen and displayed to the user. During the quiz, the user will answer questions one by one, i.e., each page only displays one question. The user can navigate the questions via the 'next' and 'pre' buttons.

The text files should be used for storing the data needed for the website (questions, points per user).

Requirements

1. Design Requirements

The website should have interfaces for:

- Entering the nickname and menu with offered options (quiz topics, Leaderboard, Exit);
- Displaying Quiz with 5 questions (one question per page);
- Navigating questions via 'next' and 'pre' buttons;
- Displaying the result from the quiz and overall points in the current attempt;
- 'Leaderboard' with the option to display the list of players (user-points) by their nicknames or greatest score;
- Displaying the nickname of the user and overall points (of all - previous and current - attempts) when the attempt is completed (for the "Exit" option);
- Restarting the quiz.

2. Functionalities

- The user should be able to insert the nickname (at the beginning of the attempt);
- The user should be able to choose different topics (at the beginning and after every quiz);
- The user should be able to navigate between questions during a quiz;
- The user can have unlimited quizzes in one attempt, can see the result of the current quiz and his/her overall points in the current attempt after every quiz;
- The user can check the overall points at the end of the attempt, can see the 'Leaderboard';
- The user should have an option to "Exit" and start a new attempt from the beginning and the end of a quiz.

3. Other Expectations

- The website should have good interfaces and navigation thru the given options.

<u>Submission</u>

1. Prepare a report that has: header

   Group member names:
   Group member student numbers:
   Group member email addresses:
   Assignment number:

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any requirements, remarks, or readme for your website. The report should also include a list of web site's files and a brief description of each file.

2. Submit a ZIP file containing all assignment files and your report (in .pdf) over Moodle submission link.

3. You are not required to submit a hard copy of the report. Please make sure you have included all the information needed, and your solution can be run in a browser.

4. Each group should present their solutions to the tutor during a lab session.

NOTES:

1. Submit your assignment before the due date. Penalties apply to all late work, except if student academic consideration has been granted. Late submissions will attract a penalty of 25% of the assessment mark. This amount is per day including weekends. Work more than 4 days late will be awarded a mark of zero.

2. Submission via email is not acceptable.

3. Assignments without reports will not be marked.

4. Not being able to answer to tutor's questions (regarding the website) or not being able to change your program/code, based on the tutor's requests may result in the deduction of marks for the assignment.

5. Enquiries about the marks can only be made within a maximum of 1 week after the assignment results are published.

6. By submitting this assignment, you declare that this assignment is **Your own work and you did not collaborate with or copy from others**.

Assessment Criteria		Total Marks	Given Marks
1.	Structure/Documentation	2	
2.	Interface	5	
3.	Functionality	8	
4.	Presentation and answers to tutor's questions	5	
5.	*Moodle Quiz 1 (individual)*	5	
	Total		