



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

SCHOOL OF COMPUTING
Faculty of Engineering

SECD2523 – DATABASE

PROJECT PHASE 2

USER'S REQUIREMENT SPECIFICATION

SECTION: 03 – 2SECR

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DATE OF SUBMISSION: 22nd JANUARY 2021

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User Requirements

Admin

Data Requirement

- **Admin**

Admin in the judging system is the organizer of the event. Admin will have the access to all Participant and Judge data. The Admin data includes unique Admin number, their name (first name, last name), phone number (up to 2), email and password. The admin will also assign selected participants' exhibition materials to each judge team which consists of maximum 2 judges.

- **Score**

The score from Judge is required by the Admin to rank the participant. The data stored includes school number, score for each judging criterion, total score, recommendation for winner of "Best of the Best" award, judge number and judging date.

- **User Information**

User information consists of both Participant data and Judge data stored in the system. Participant data is required for Judge to provide the score for each school participated. The data required are unique judge number, their name (first name, last name), their passport size photo, phone number (up to 2) and email (for Judge), and unique school number, school name, address (street, city, and postcode), phone number (up to 2) and email (for Participant).

- **Ranking**

After the score is generated by the Judge, the Admin will rank the score to provide the winner. The stored data is school number, ranking and announcement date.

Data Entry

- a) Enter the ranking of each school
- b) Enter the details of an admin

Data Update/Delete

- a) Update/delete the details of school ranking
- b) Update/delete the details of an admin

Data Query

- a) List the details of a school.
- b) Identify the total number of participating schools.
- c) Identify the total number of judging materials.
- d) List the school number, school name ordered by score for each judging criterion.
- e) List the school number, school name that is recommended for winning the “Best of the Best” award.
- f) List the school number, school name ordered by total score.
- g) List the details of a judge.
- h) Identify the details of schools that have a total score higher than 80 marks.
- i) List the details of judging scores.
- j) Identify the judging scores that are still NULL for score for each judging criterion, recommendation for winner of the “Best of the Best” award and total score.
- k) List the school number, school name ordered by the ranking

Judges

Data Requirement

- **Judge**

Every judge participating in the RCE Iskandar needs to register themselves and provide data that describes them including a unique judge number, their name (first name, last name), their passport size photo, phone number (up to 2), email and password. Each judge will be teaming up with another judge which will make up a judge team consisting maximum of 2 judges.

- **Assigned Judging Material**

Each judge will be assigned several participant's materials to judge and the same material will be judged by one or more judges. The data stored regarding each judging material includes school number, lead teacher details (name, email, phone number), link of school poster, link of video that has been published in school's Facebook page and link of activities related to Low Carbon School practices that has been published in school's Facebook page.

- **Judging Score**

They will be the score of the judging material being judged by the judge. The data stored includes school number, score for each judging criterion, total score, recommendation for winner of "Best of the Best" award, judge number and judging date.

- **Participant**

Every school participating in the RCE Iskandar needs to register themselves and provide data that describes them including a unique school number, school name, address (street, city, and postcode), phone number (up to 2) and email.

Data Entry

- a) Enter the details of the new judge (such as judge J001 with name Ali bin Abu)
- b) Enter the details of judging score for a particular school's exhibition material (such as judge J001 judge the exhibition material of school SMK Sekolah Contoh on 12 May 2020)

Data Update/Delete

- a) Update/delete the details of a judge
- b) Update/delete the details of a judging score

Data Query

- a) List the details of a school.
- b) Identify the total number of participating schools assigned to the judge.
- c) Identify the total number of judging materials assigned to the judge.
- d) List the school number, school name ordered by score for each judging criteria.
- e) List the school number, school name that is recommended for winning the "Best of the Best" award.
- f) List the school number, school name ordered by total score.
- g) List the details of a judge.
- h) Identify the details of schools that have a total score higher than 80 marks.
- i) List the details of judging scores.
- j) Identify the judging scores that are still NULL for score for each judging criterion, recommendation for winner of the "Best of the Best" award and total score.

Participants

Data Requirement

- **Participant**

Every single school that participates in this competition must input their specific data, such as a unique school number, school name, address (street, city, postcode), phone number (up to 2), email and password.

- **Exhibition Material**

Participants are required to submit their materials for this competition, such as videos, presentation, and school's Facebook link, lead teacher details (name, email, phone number).

- **Results**

This is a data that will be given from the system. This data will be provided for the participants which consists of participants result and announcing date.

Transaction Requirements

Data Entry

- a) Enter the details of the participants
- b) Enter the details of the participants' exhibition materials

Data Update/Delete

- a) Update/delete the details of the participants
- b) Update/delete the details of the participants' exhibition materials

Data Query

- a) List the details of the participants
- b) List the details of each participant's exhibition material
- c) Identify participants' missing exhibition material that is required for the exhibition
- d) List the ranking for participants

General Requirements

Performance

Our RCE Iskandar Sustainable and Low Carbon Schools Exhibition proposed online application is generally will be active only during the phase where all the parties involved in the event will contribute to submit the materials, judging the materials as well as managing the results of the exhibition. Therefore, the peak time of this application may be around 1 to 2 months for materials submission and 2 to 3 months of judging process to be done. During the application run time, certain requirements are needed to be met in ensuring that the application runs smoothly. The conditions include:

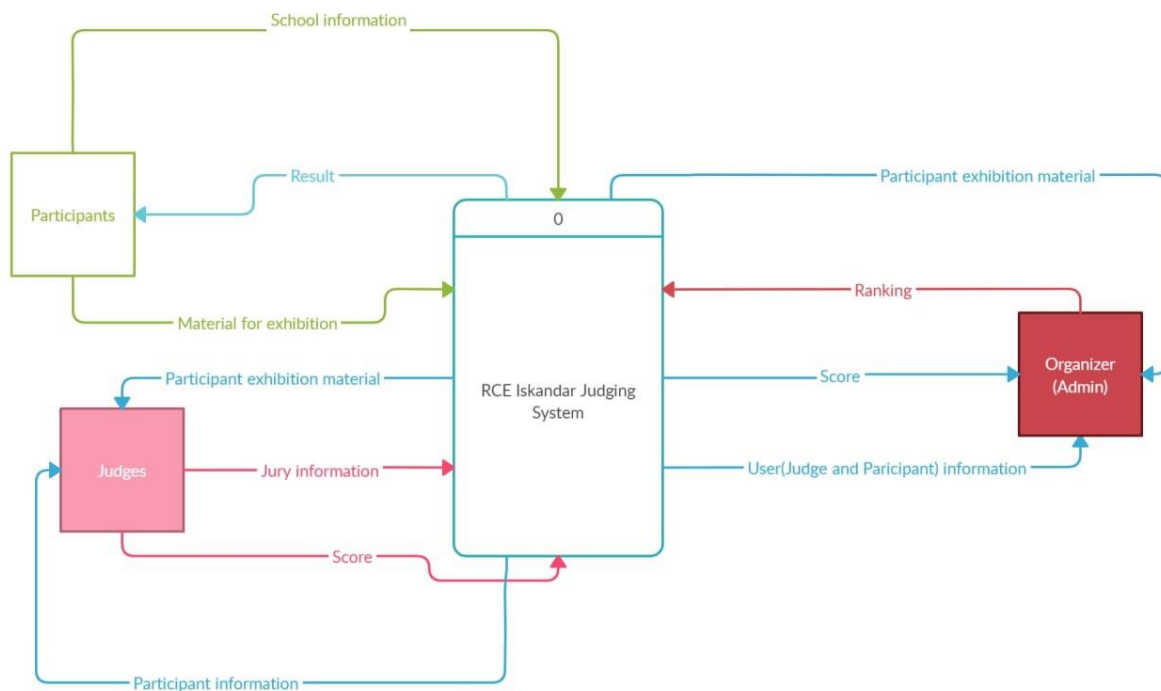
- Ensuring the computational Mathematics of the application program code correctly written to give out an accurate results
- Implementing certain data structure and algorithm concept in the system to allow sorting, searching, and displaying selected outputs
- Ensuring the notification function works well to the admin for telling them that there are participants who already submit their materials to be judged
- Making sure that there is ample data storage space for participants to submit their materials by considering size of data types such as posters and videos

Level of Security

Since that the RCE Iskandar Sustainable and Low Carbon Schools Exhibition proposed online application allows more than 1 parties to get into the system, each of different parties will have different limitations as follows:

- Each different user will need to enter credentials given by admin beforehand to enter the system for accessing desired functions
- The database system must be secured all the time as it contains personal information of participants and their submission materials
- Admin the only who can hold and manage every data without restriction
- Limiting the participant access to only submit and receive review, and cannot see other participants' submissions

Context Diagram



Managing User Views

Cross-Reference of User Views with The Main Types of Data Used by Each Entity

The table beneath shows the cross-reference of user views with the main types of data used by the corresponding user view of admin, judge, and participants. Based on this evaluation, we use the centralized approach to accelerate the interaction which occurs within the application system which understands analytical data speedier and finalizes specific tasks with extra quality.

	Admin	Judge	Participant
Admin	X		
Score	X	X	X
User Info	X		
Ranking	X		X
Judge	X	X	
Material	X	X	X
School	X	X	X
Participant	X		X

References

Connolly, T. (2014). *Database Systems A Practical Approach to Design, Implementation, and Management*. London: Cengage Publishing Services.

Linstead, D. (2016, January 15). *Advanced Data Vault Modeling*. Retrieved from Science Direct: <https://www.sciencedirect.com/topics/computer-science/reference-table>