



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

**SCHOOL OF COMPUTING**  
Faculty of Engineering

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## **SECD2523 – DATABASE**

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### **PROJECT PHASE 1**

### **DATABASE PLANING & SYSTEM DEFINITION**

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SECTION: 03 – 2SECR

COURSE NAME: BACHELOR OF COMPUTER SCIENCE – COMPUTER NETWORKS & SECURITY

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## Introduction

Regional Center of Expertise (RCE) is an organization whereby decently recognized by their efforts in reorienting existing education towards sustainability. RCEs aspire to transform macro objectives into the perspective of the regional populations in which they work. RCEs are devoted to further generating, accelerating, and mainstreaming Education for Sustainable Development (ESD) by executing many measures to contribute to the success of Sustainable Development Goals (SDGs). Plus, RCEs aid prepare local leaders of tomorrow with the tools and information they need to make smart and sustainable choices for the future.

Meanwhile, RCE Iskandar was established when Iskandar Malaysia is nobly conceded by the United Nations University-Institute for the Advanced Study of Sustainability (UNU-AS). RCE Iskandar promotes ESD to all stakeholders in Iskandar Malaysia and to disseminate best practices on Education for Sustainable Development to Asian countries.

RCE stakeholders involve school teachers, professors at higher education institutions, environmental NGOs, scientists, researchers, museums, zoos, botanical gardens, local government officials, representatives of local enterprises, volunteers, media, civic associations or individuals who work in the spheres of sustainable development such as economic growth, social development, and environmental protection, students and learners at all levels (University, 2018).

Narrowing down to the report, this document is about to discuss problems that faced by the RCE Iskandar while organizing an exhibition namely RCE Iskandar Sustainable and Low Carbon School Exhibition. The problems are defined in the next part of the discussion. Thus, by outlining the difficulties, we also come with a proposed solution to overcome the problem faced by RCE Iskandar during the event.

Therefore, we managed to suggest some applicable system that can be used by RCE Iskandar to ease the process that is related to the defined problems.

## Problem Definition

### Problem or Issues in “As-Is” System

#### **1. Manual calculation of total score**

As the current judging system (Google Form) that the juries are using now, after the judging process is completed, the head of jury will still have to calculate the total score of a particular participating school manually which is a very tedious work.

#### **2. Easily get lost during the judging session**

Due to the current judging system that the organizer uses, which is not a judging-friendly GUI design as the navigation of judging criteria is inconvenient. The jury does not know the current progress of judging and cannot be sure if the previous criteria was done completely.

#### **3. Mistake during the transfer of information**

We were told that the participants need to submit their works and evidence to a Google Form prepared by the organizer and then the organizer will then transfer links in an organized manner into the judging form. The manual transfer process may allow human error to occur.

#### **4. Inconvenience during navigation**

According to the juries, they are having hard time navigating and switching between the Judging Google Form and the participants works on a browser. This situation will increase the amount of unnecessary time and effort to complete the judgement towards one participant.

#### **5. Having to fill in some section manually every time**

The juries will have to fill in their email and identity in the judging form every time they start judging another participant.

#### **6. No proof or evidence ticket as well as no notification sent as alert to both organizer and participants.**

There is no notification or record of an action to both organizer and participants. For example, even if a participant has done submitting their works on the Google Form, the organizer would know unless they go and look at the response themselves. Same goes to the participant side.

#### **7. Issue from participants**

The submissions from participants are not well-organized as some schools send a bunch of evidence for past activities while some might miss out some of the submission material.

## Proposed Requirement for “To-Be” System

Besides stating the problems that they faced during judging system, the organizer authorities of RCE Iskandar Sustainable and Low Carbon Schools Exhibition also mentioned few features that they wish to have on the proposed system, as below:

1. Easy navigation
2. Auto-calculation of marks
3. Have certain degree of overriding towards the final mark
4. Keeps record of every activities submitted by each school in the database
5. Allows the participant to systematically submit the online exhibition materials

Hence, we have a clear picture of what the organizer wanted. Our proposed application, namely RCE Iskandar Exhibition is a computer application which allows the participant to systematically submit the online exhibition materials and juries to judge at ease.

First, the system required login of the user before getting into the application. There is a 3-level hierarchy in this application, which is Participant, Jury and Organizer at the top of the hierarchy, which also have the highest authority in this system. The participant and jury are assigned by the organizer by giving them a particular key to enter during the registration. In another word, the role of the registrant is decided by the key given out by the organizer, different roles will have different in-app interfaces.

Let us start with participants, participants will have a simple interface where it asks them to submit their links of all their works. Once the participants are done submitting their works, the application will notify the organizer, which is basically the admin of this application. Vice versa, if their works got selected or won any prizes, a notification will be sent to them as well.

The juries will get to have participants who complete the submission successfully displayed in their interface, there will be a colored dot indicating whether the judging process has been done on this participant. Juries can see the submission links and poster of the participant’s work once they click into one of them and the judging form will be located below it. The judging criteria are kept in a retractable tab where each tab shows the complete percentage of that criteria, there will be an indicator for completeness of each of its child criteria with a ticking symbol. Juries will be directed to the link when they click it and now, they can minimize the window and make the application float above the browser window, finally starting the judging process. And of course, the total score will be calculated automatically.

Finally, the organizer. As requested, before the score gets finalized, the organizer gets to review every single of them. What is displayed to the organizer are the participants and their respective evidence, score and the jury who judge them.

## Objective

1. To ease calculation of score obtained by each participant.
2. To ease the communication between the organizer and the participants.
3. To keep record of all participants' content and submission.
4. To ease the judging process.
5. To streamline the procedures of the event.

## Constraint Identified for the System Development

After analyzing what problem, the organizer had during this online exhibition, we came up with a proposed “to-be” system. After that, we are down to system development. Not every system can be perfect from the start, and because of that we have discovered a variety of issues and constraints in the system development. These are the constraints that we have identified in the upcoming system development.

### **1. Judging cannot be automatic.**

One of the constraints that we have identified is that a system cannot judge a submission automatically. The sole reason behind this is because a system moreover a computer, cannot judge and criticize a media whether it is a picture or a video. It is too ambiguous for a computer to judge something that can be as random as possible. The only thing that the system can judge by its own is the score calculations.

### **2. Platforms for the system**

For the system, there will be limitations on which platform can be used. It will depend on the format of the finalized “to-be” system whether which platform will be utilized.

### **3. System cannot embed video or post from another platform.**

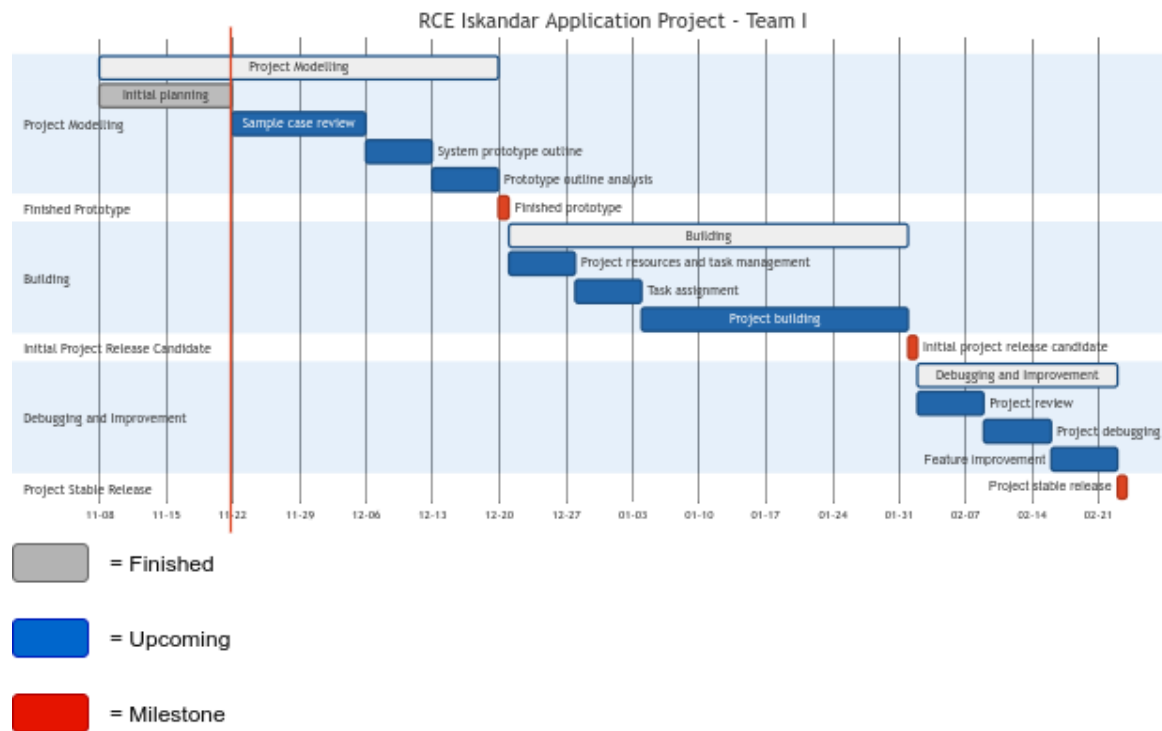
The system cannot gain access to media from other platforms. The system can only direct the users to respective links that were put in the system.

## Benefits Gained from the “To-Be” System

There will be some benefits that can be gained through our proposed “To-Be” System. Here are the benefits that the user can gain through our proposed “to-be” system are as follows.

1. Managing submissions can be easier with our new system
2. The judges do not have to go through back and forth for checking the submissions because our system stores the submissions in one place.
3. It will be easy to keep track on what the judges have rated and what they have not rated.
4. Scores will be automatically calculated with our system. The judges just need to tick some points and the system will count itself.
5. There will be transparency on how the judges will rate each submission.
6. The system will be easy to navigate, so the participants and the judges will not get lost easily.
7. The system will be easily accessible by all users that are involved in the RCE Iskandar Exhibition.
8. The participants can keep track of their submissions, whether they have completed their submissions or still lack some of the items.

# Project Planning – Gantt Chart

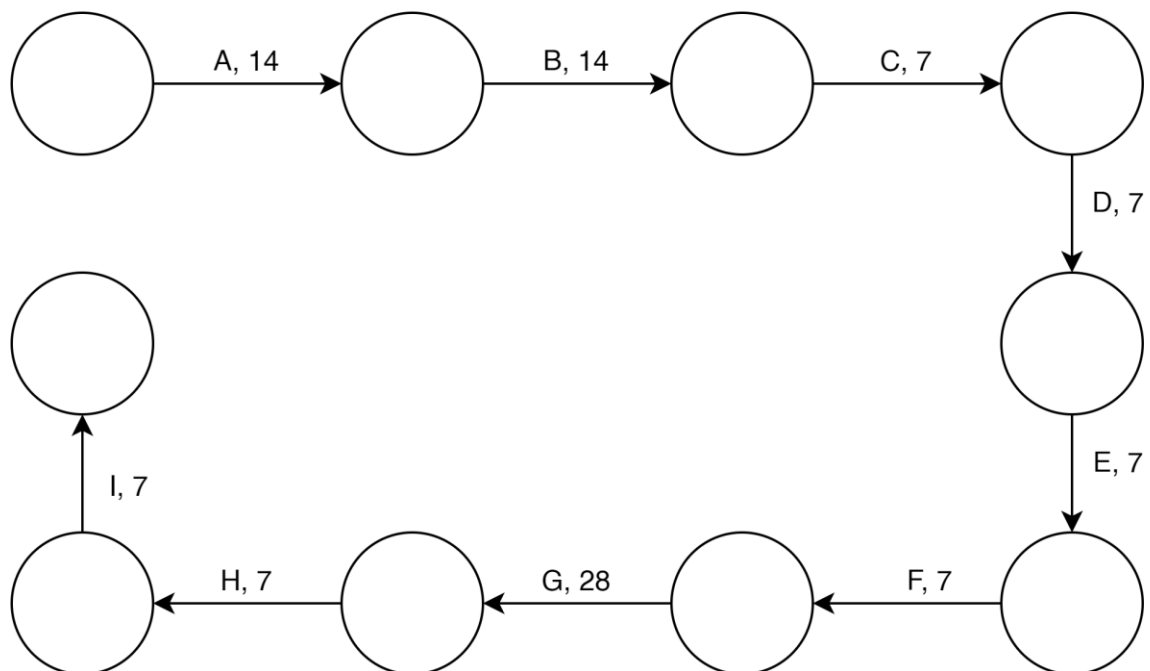




## Project Planning – Pert Diagram

Activity	Description	Predecessor	Expected Time
Project Modelling			
A	Initial planning	None	14 days (8/11/2020 - 21/11/2020)
B	Sample case review	A	14 days (22/11/2020 - 5/12/2020)
C	System prototype outline	B	7 days (6/12/2020 - 12/12/2020)
D	Prototype outline analysis	C	7 days (13/12/2020 - 19/12/2020)
Milestone	Finished Prototype		
Building			
E	Project resources and task management	D	7 days (20/12/2020 - 26/12/2020)
F	Task assignment	E	7 days (27/12/2020 - 2/1/2021)
G	Project building	F	28 days (3/1/2021 - 30/1/2021)
Milestone	Initial project release candidate		
Debugging and Improvement			

H	Project review	G	7 days (31/1/2021 - 6/2/2021)
I	Project debugging	H	7 days (7/2/2021 - 13/2/2021)
J	Feature improvement	I	7 days (14/2/2021 - 20/2/2021)
Milestone	Project stable release		



**All possible path:** A-B-C-D-E-F-G-H-I

Length = 98 days

**Critical path:** A-B-C-D-E-F-G-H-I

Shortest amount of time to complete the project = 98 days

**Slack time:**

Since our activities are done in sequence, there is no non-critical path, which also means no slack time.

## References

1. University, U. N. (2018, November 21). *RCE Iskandar*. Retrieved from Global RCE Network Education for Sustainable Development: <https://www.rcenetwork.org/portal/rce-profile-detail/rce-iskandar>
2. Universiti Teknologi Malaysia. (2020). TOPIC II Project Planning Process [PDF]. Retrieved from [https://elearning.utm.my/20211/pluginfile.php/1083344/mod\\_resource/content/1/02%20TOPIC%20II%20Project%20Planning%20Process%202020.pdf](https://elearning.utm.my/20211/pluginfile.php/1083344/mod_resource/content/1/02%20TOPIC%20II%20Project%20Planning%20Process%202020.pdf)