SCHOOL OF COMPUTING
Faculty of Engineering

Database Final Report

Subject: SECD2523-03 Database

Course: Bachelor in Computer Science (Computer Network and Security)

Group: I

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1.0 Introduction

This is the final report for SECD2523 Database where we are required to compile all the previous phase of the project from phase 1 until 4 together with phase 5 of the project which is the project implementation where we are required to build a database using Oracle SQL DBMS for our proposed system/prototype namely RCE Iskandar Judging System that will replace the current judging system used during RCE Iskandar Sustainable and Low Carbon School Exhibition.

2.0 Database Planning & System Definition

2.1 Problem Background

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.

Narrowing down to the report, this document is about discussing problems that are 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's features that can be used by RCE Iskandar to ease the process that is related to the defined problems.

2.2 Problem Definition

2.2.1 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 doesn't know the current progress of judging and can't 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 organiser and then the organiser will then transfer links in an organised 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 particular 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 themselve. Same goes to the participant side.

7. **Issue from participants**

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

2.2.2 Proposed Requirement for "To-Be" System

Besides stating the problems that they faced during judging system, the organiser 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 pretty 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 of all, 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 is 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's 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 coloured dot indicating whether the judging process has been done on this particular 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 criterias are kept in a retractable tab where each tab shows the complete percentage of that particular criteria, there will be an indicator for completeness of each of it's 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.

Last but not least, the organizer. As requested, before the score gets finalised, the organizer gets to review every single of them. What's displayed to the organizer are the participants and their respective evidence, score and the jury who judge them.

2.2.3 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 finalised "to-be" system whether which platform will be utilised.

3. **System cannot embed video or post from other 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.

2.2.4 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.

Tangible benefits that users can achieve with using the system are they will be able to track on what the judges have rated and what they have not rated. Scores will also be automatically calculated within the system. The judges just need to tick some points and the system will count itself. Also there will be transparency on how the judges will rate each submission. For the judges, they will not have to go through back and forth checking the submissions because our system stores the submissions in one place, meaning it will have a menu for the submissions.

The users can also feel intangible benefits like efficiency and convenience. It also will be really easy to navigate throughout the system with the new model for the RCE system.

2.3 Gantt Chart

The gantt chart will be zipped with this report in an MS Excel file namely "Team I Gantt Chart.xlsx".

3.0 User's Requirement Specification

3.1 Data Requirements

Entity Name	Attributes	Data Requirement
Admin	aID aName aPhone aEmail aPassword	● aID and aEmail should be unique to each other and admin user. ● Number of phones stored should be at least 1 and at mo
Ranking	announce_Date finalRank	● Not all exhibition material will have a final rank.

Participant	sID
	sName
	sAddr
	  City
	  State
	  Postcode
	sPhone
	sEmail
	sPassword
		● sID and sEmail should be unique to each other a
		  participating school users.
		● Number of phones stored should be at least 1 and at mo

Judge	jID jName jPhoto jPhone jEmail jPassword	● jID and jEmail should be unique to each other and ente ● Number of phones stored should be at least 1 and at mo
JudgeTeam	tID	● tID is automatically generated by the system.

Exhibition_Material	mID
	up_Date
	lead_Teach
	  tName
	  tEmail
	  tPhone
	Poster
	Video
	FB_Page
	Rank
		● mID is automatically generated by the system.
		● up_Date is the date and time those submissions being u
		● Rank is automatically calculated by the system once th
		  is done.

Attribute for relationship "judge"	sec1_Score sec2_Score sec3_Score sec4_Score sec5_Score sec6_Score /tScore Recommend jDate	● tScore is the total all of secN_Score values. ● Recommend should only store numbers with length of or '0'. ● jDate is the date when the judge confirms the judging r

3.2 Transaction Requirement

Entity Name	Data Entry	Data Update	Data Deletion	Data Queries
Admin	Sign up by admin	Update information by admin	Delete account by admin	-
Ranking	Enter by admin	Update the final ranking by admin	Delete the ranking by admin	Search for final ranking by admin and participant
Participant	Sign up by participating school	Update information by participating school	Delete account by participating school/admin	Query on Participant data by admin and judge
Judge	Sign up by judge	Update information by judge	Delete account by judge/admin	Query on Judge data by admin
JudgeTeam	Assign by admin	Update the member of judge team by admin	Delete team information by admin	Query on team data by admin
Exhibition_Material	Submit by participating school	Update the submission by participating school	Delete the submission by participating school	Query on the submission by participating school, admin and judge
Attribute for relationship "judge"	Enter by judge	Update the judging result by judge	Delete the judging result by judge	Query on the judging result by judge and admin

3.3 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' submission.

3.4 Cross-Reference of User Views

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

4.0 Conceptual Design

4.1 Conceptual ERD
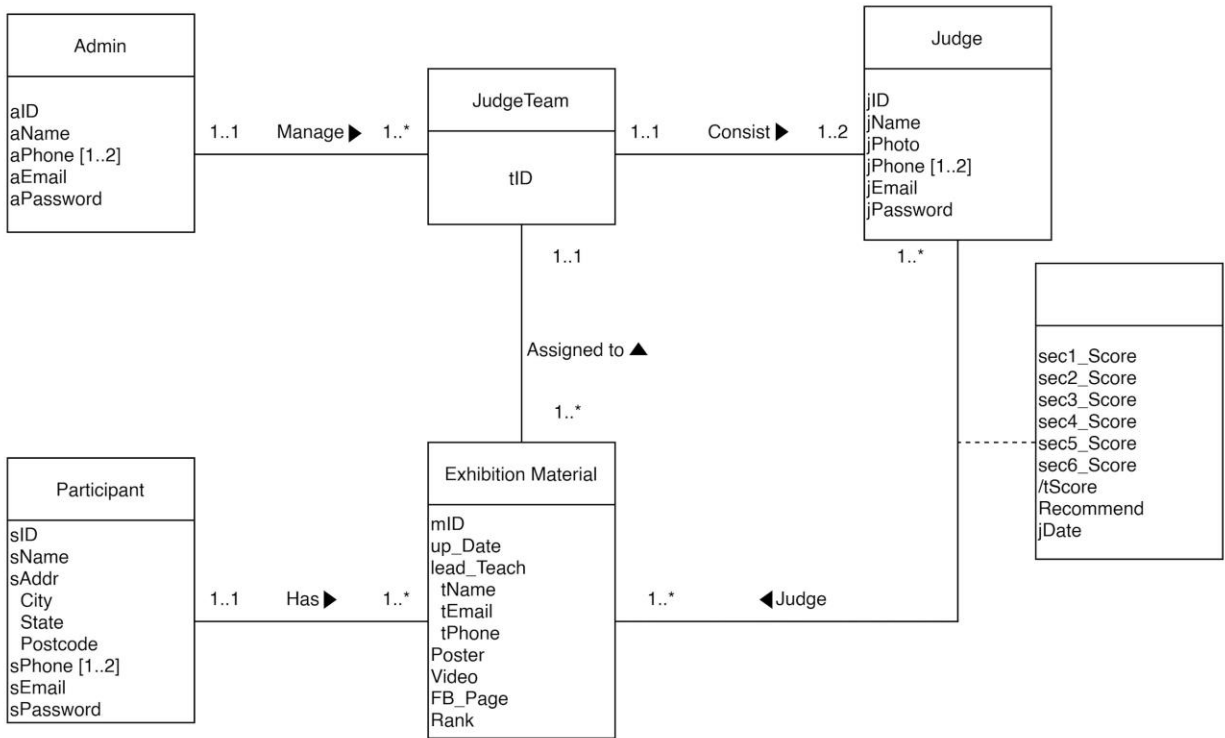
Figure 1: Conceptual ERD

4.2 Data Dictionary

Entity Name	Attributes	Description	Datatype and Length	Nullity	Multi-valued
Admin	aID	Unique id for admin login	varchar(8)	No	No
	aName	Name of admin	varchar(50)	No	No
	aPhone	Phone number	number(11)	No	Yes
	aEmail	Unique email	varchar(50)	No	No
	aPassword	Login password of admin	varchar(15)	No	No
Participant	sID	Unique id for school login	varchar(8)	No	No
	sName	Name of school	varchar(50)	No	No
	sAddr	Address of school			
	City		varchar(20)	No	No
	State		varchar(20)	No	No
	Postcode		varchar(5)	No	No
	sPhone	Phone number	number(11)	No	Yes
	sEmail	Unique email	varchar(50)	No	No
	sPassword	Login password of school	varchar(15)	No	No
Judge	jID	Unique id for judge login	varchar(8)	No	No
	jName	Name of judge	varchar(50)	No	No
	jPhoto	Link of photo of judge	varchar(200)	No	No
	jPhone	Phone number	number(11)	No	Yes
	jEmail	Unique email	varchar(50)	No	No
	jPassword	Login password for judge	varchar(15)	No	No

JudgeTeam	tID	Unique ID of assigned judge team to evaluate which materials	varchar(10)	No	No
Exhibition_ Material	mID	Unique ID assigned to material(s) of exhibition	varchar(5)	No	No
	up_Date	Upload date that the material was sent into the system	Date	No	No
	lead_Teach	Information of the teacher that lead their students			
	tName	Teacher's name	varchar(50)	No	No
	tEmail	Teacher's email	varchar(50)	No	No
	tPhone	Teacher's phone number	varchar(11)	No	Yes
	Poster	Link of poster to be judged	varchar(20)	No	No
	Video	Link of video to be judged	varchar(20)	No	No
	FB_Page	Link of activities posted on Facebook	varchar(20)	No	No
	Rank	Ranking of this exhibition material	number(2)	No	No
Attribute for relationship "judge"	sec1_Score	Total score of first judging criteria	number(2)	No	No
	sec2_Score	Total score of second judging criteria	number(2)	No	No
	sec3_Score	Total score of third judging criteria	number(2)	No	No
	sec4_Score	Total score of fourth judging criteria	number(2)	No	No
	sec5_Score	Total score of fifth judging criteria	number(2)	No	No
	sec6_Score	Total score of sixth judging criteria	number(2)	No	No
	tScore	Derived total score for all criteria	number(3)	No	No
	Recommend	Recommendation for "Best of the Best Award"	char(1)	No	No
	jDate	Judging date	Date	No	No

DATA DICTIONARY – ENTITY RELATIONSHIP

Entity Name	Multiplicity	Relationship	Entity Name 2	Multiplicity
Admin	1..1	Manage	JudgeTeam	1..*
JudgeTeam	1..1	Consist	Judge	1..2
ExhibitionMaterial	1..*	Assigned to	JudgeTeam	1..1
Judge	1..*	Judge	ExhibitionMaterial	1..*
Participant	1..1	Has	ExhibitionMaterial	1..*
ExhibitionMaterial	1..1	Has	Ranking	0..1

4.2 Logical DFD
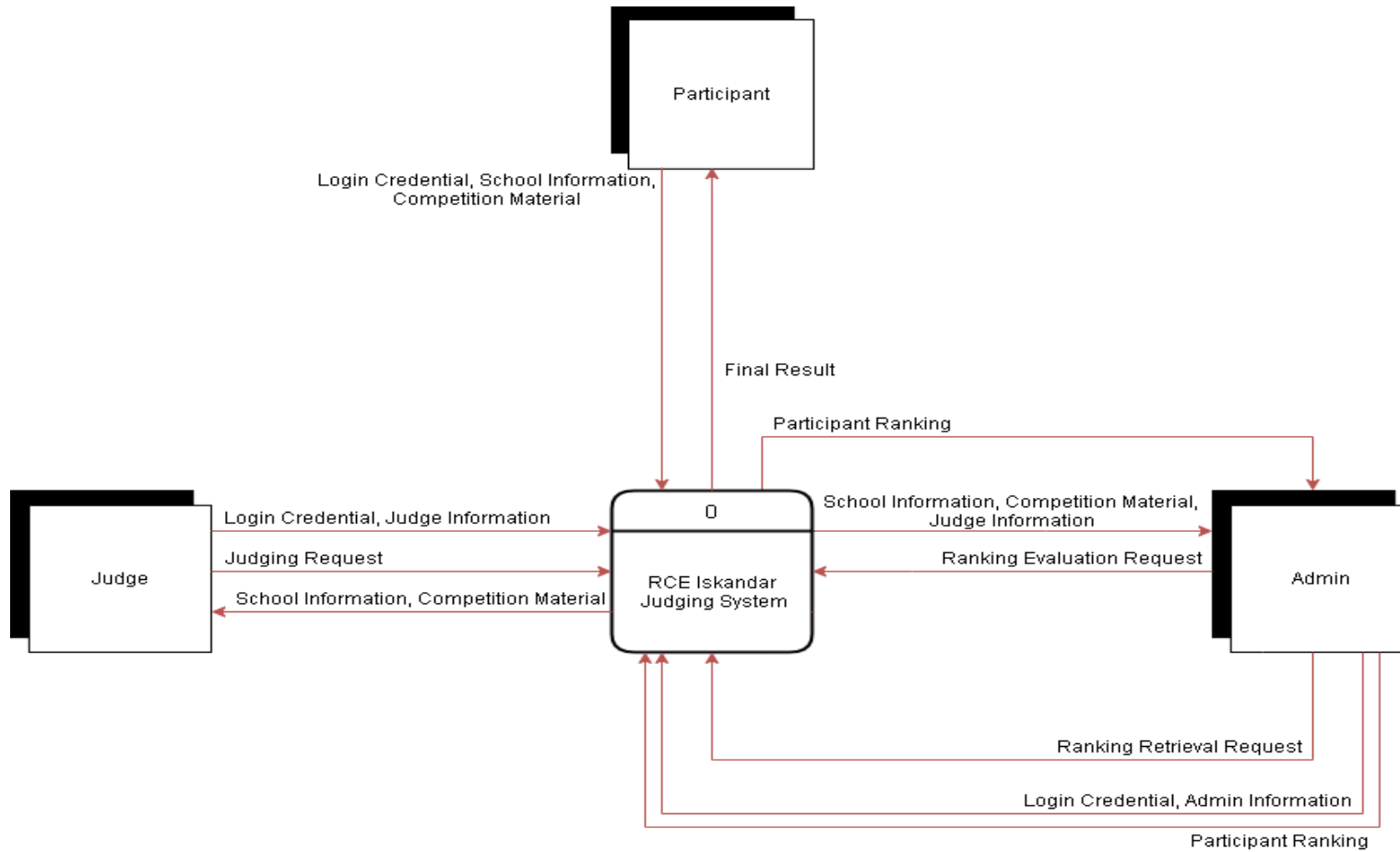
Figure 3: Context Diagram

Figure 4: Diagram 0

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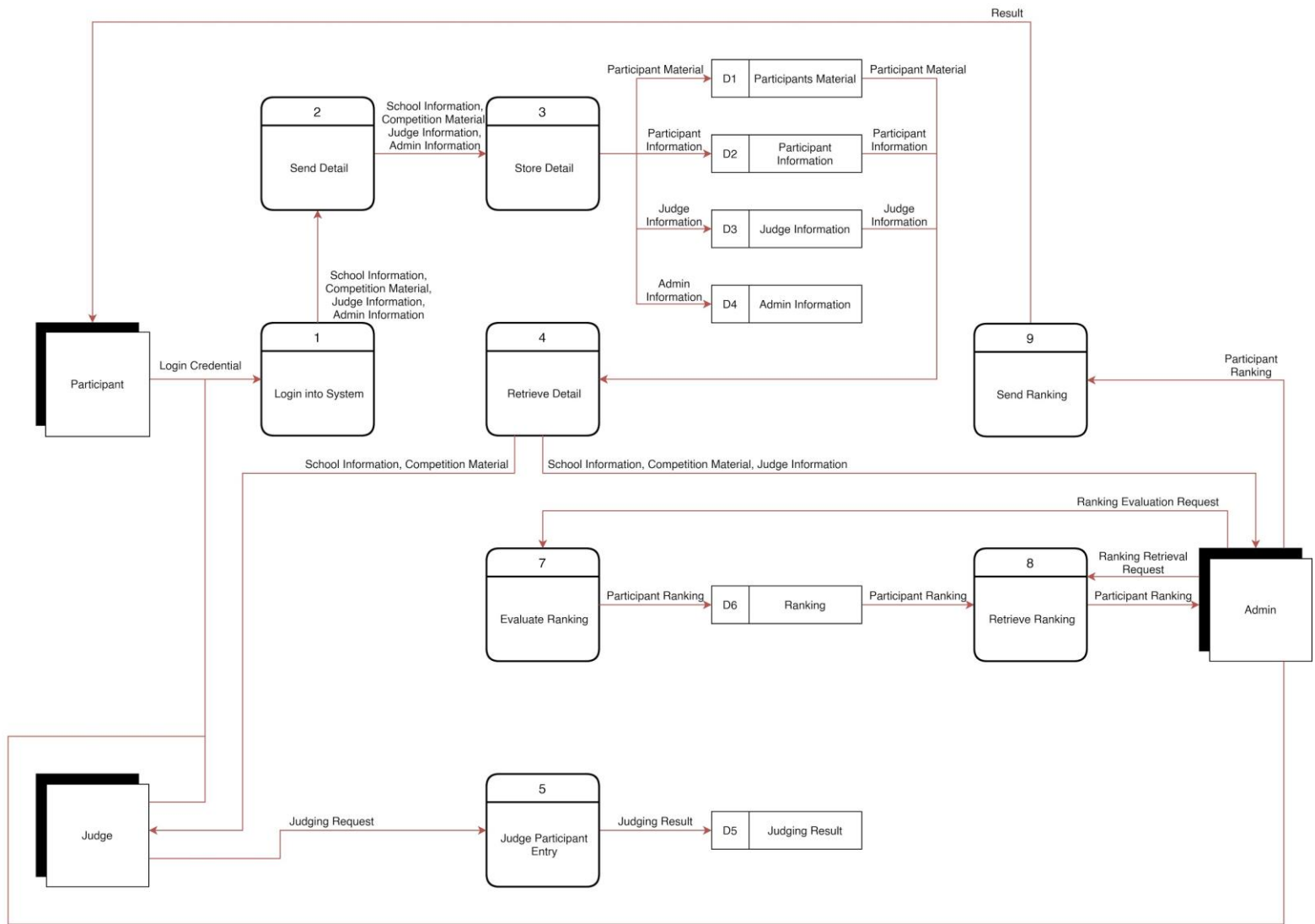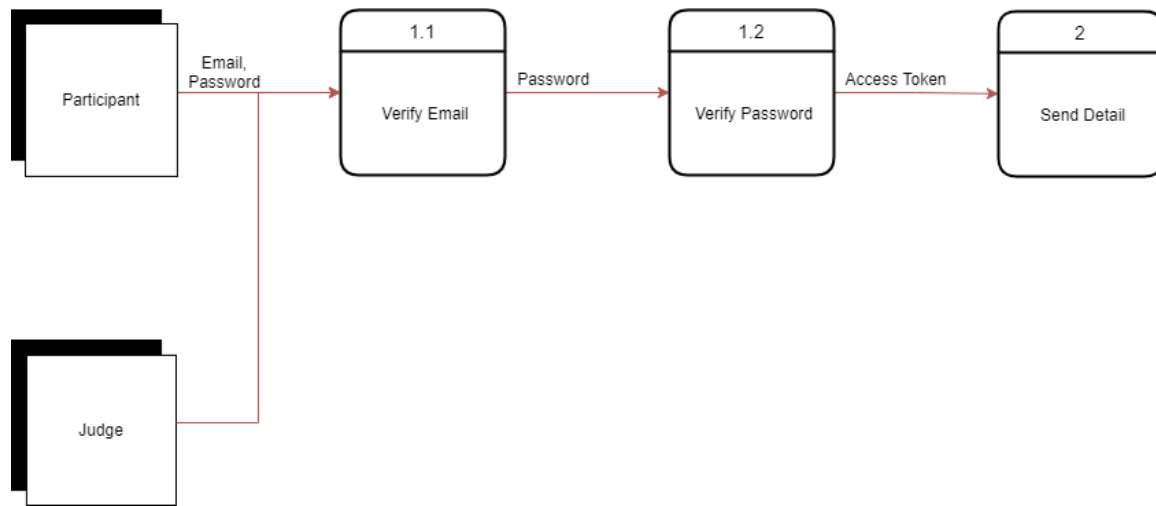
Figure 5: Child Diagram Process 1
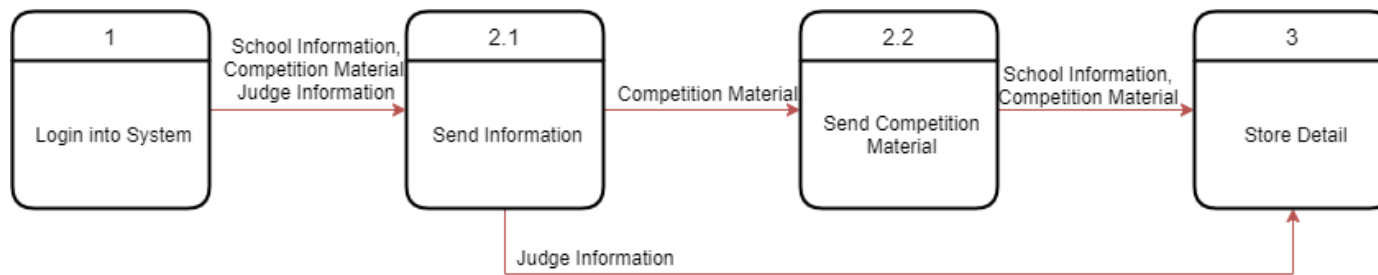
Figure 6: Child Diagram Process 2
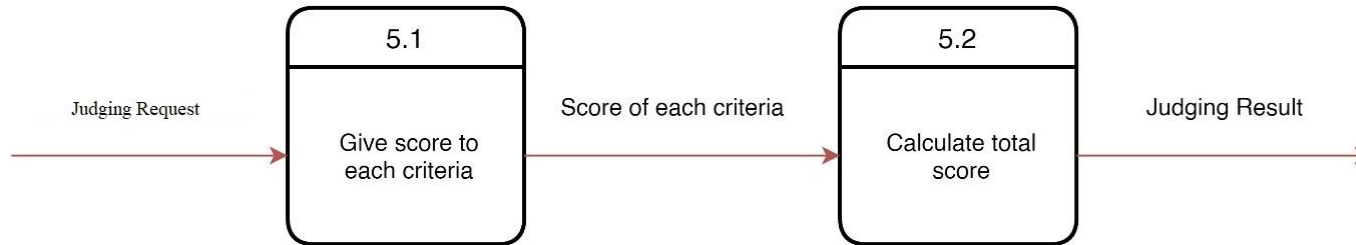
Figure 7: Child Diagram Process 5
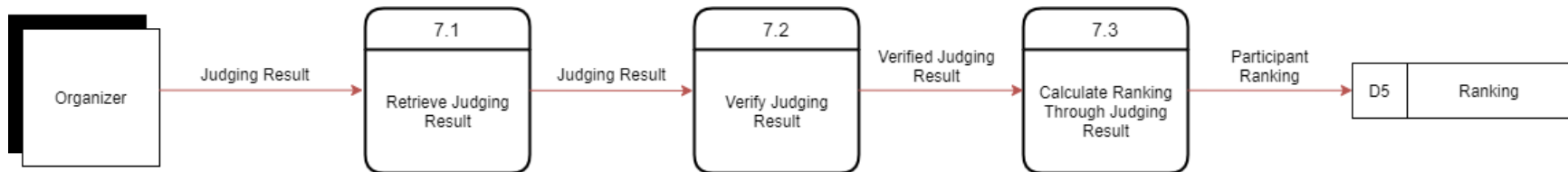
Figure 8: Child Diagram Process 7

5.0 Logical Design

5.1 Initial Logical ERD
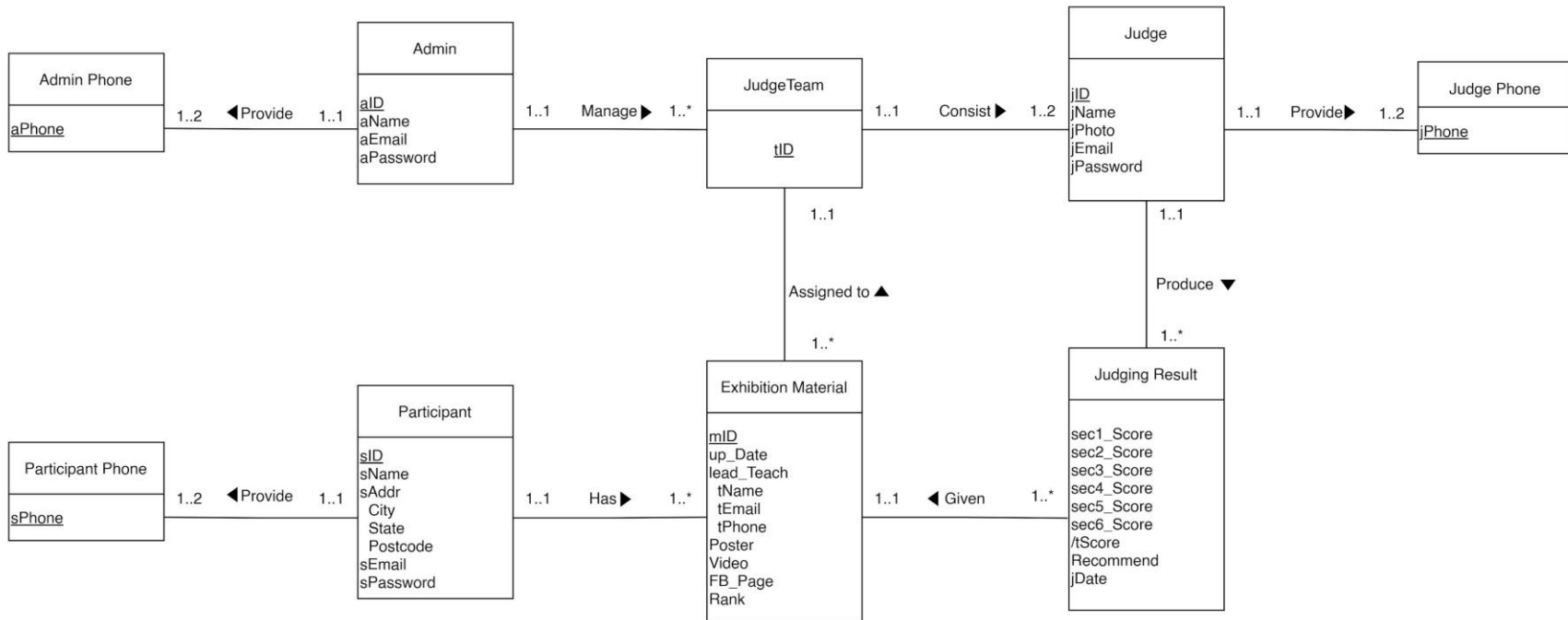
Figure 9: Initial Logical ERD

5.2 Relational Schema

1NF Relational Schema

Relational Schema
Admin(aID, aName, aEmail, aPassword) Primary Key: aID
Admin_Phone(aPhone, aID)   Primary Key: aPhone   Foreign Key: aID REFERENCES Admin(aID)
JudgeTeam(tID, aID)   Primary Key: tID   Foreign Key: aID REFERENCES Admin(aID)
Judge(jID, jName, jPhoto, jEmail, jPassword, tID)   Primary Key: jID   Foreign Key: tID REFERENCES JudgeTeam(tID)
Judge_Phone(jPhone, jID)   Primary Key: jPhone   Foreign Key: jID REFERENCES Judge(jID)
Participant(sID, sName, City, State, Postcode, sEmail, sPassword)   Primary Key: sID

Participant_Phone(sPhone, sID)

Primary Key: sPhone

Foreign Key: sID REFERENCES Participant(sID)

Exhibition_Material(mID, up_Date, tName, tEmail, tPhone, Poster, Video, FB_Page, Rank, sID, tID)

Primary Key: mID

Foreign Key 1: sID REFERENCES Participant(sID)

Foreign Key 2: tID REFERENCES JudgeTeam(tID)

Judging_Result(jID, mID, sec1_Score, sec2_Score, sec3_Score, sec4_Score, sec5_Score, sec6_Score, tScore, Recommend, jDate)

Primary Key: jID, mID

Foreign Key 1: jID REFERENCES Judge(jID)

Foreign Key 2: mID REFERENCES Exhibition Material(mID)

2NF Relational Schema

2NF is the same as 1NF as there exists no partial dependency in the schema.

Relational Schema
Admin(<u>aID</u>, aName, aEmail, aPassword) Primary Key: aID
Admin_Phone(<u>aPhone</u>, aID)   Primary Key: aPhone   Foreign Key: aID REFERENCES Admin(aID)
JudgeTeam(<u>tID</u>, aID)   Primary Key: tID   Foreign Key: aID REFERENCES Admin(aID)
Judge(<u>jID</u>, jName, jPhoto, jEmail, jPassword, tID)   Primary Key: jID   Foreign Key: tID REFERENCES JudgeTeam(tID)
Judge_Phone(<u>jPhone</u>, jID)   Primary Key: jPhone   Foreign Key: jID REFERENCES Judge(jID)
Participant(<u>sID</u>, sName, City, State, Postcode, sEmail, sPassword)   Primary Key: sID

Participant_Phone(sPhone, sID)

Primary Key: sPhone

Foreign Key: sID REFERENCES Participant(sID)

Exhibition_Material(mID, up_Date, tName, tEmail, tPhone, Poster, Video, FB_Page, Rank, sID, tID)

Primary Key: mID

Foreign Key 1: sID REFERENCES Participant(sID)

Foreign Key 2: tID REFERENCES JudgeTeam(tID)

Judging_Result(jID, mID, sec1_Score, sec2_Score, sec3_Score, sec4_Score, sec5_Score, sec6_Score, tScore, Recommend, jDate)

Primary Key: jID, mID

Foreign Key 1: jID REFERENCES Judge(jID)

Foreign Key 2: mID REFERENCES Exhibition Material(mID)

3NF Relational Schema

The school address attributes (Street, City, Postcode) in Participant entity and the lead teacher attributes (tName,tEmail, tPhone) in the Exhibition Material entity portrait transitive functional dependency. Hence, 2 new entities were created which are AdvisorTeacher and District.

Relational Schema
Admin(aID, aName, aEmail, aPassword) Primary Key: aID
Admin_Phone(aPhone, aID) Primary Key: aPhone Foreign Key: aID REFERENCES Admin(aID)
JudgeTeam(tID, aID) Primary Key: tID Foreign Key: aID REFERENCES Admin(aID)
Judge(jID, jName, jPhoto, jEmail, jPassword, tID) Primary Key: jID Foreign Key: tID REFERENCES JudgeTeam(tID)
Judge_Phone(jPhone, jID) Primary Key: jPhone Foreign Key: jID REFERENCES Judge(jID)
District(lotID, City, State, Postcode) Primary Key: lotID

Participant(sID, sName, lotID, sEmail, sPassword)

Primary Key: sID

Foreign Key: lotID REFERENCES District(lotID)

Participant_Phone(sPhone, sID)

Primary Key: sPhone

Foreign Key: sID REFERENCES Participant(sID)

AdvisorTeacher(advisorID,tName, tEmail, tPhone)

Primary Key: advisorID

Exhibition_Material(mID, up_Date, advisorID, Poster, Video, FB_Page, Rank, sID, tID)

Primary Key: mID

Foreign Key 1: sID REFERENCES Participant(sID)

Foreign Key 2: tID REFERENCES JudgeTeam(tID)

Foreign Key 3: advisorID REFERENCES AdvisorTeacher(advisorID)

Judging_Result(jID, mID, sec1_Score, sec2_Score, sec3_Score, sec4_Score, sec5_Score, sec6_Score, tScore, Recommend, jDate)

Primary Key: jID, mID

Foreign Key 1: jID REFERENCES Judge(jID)

Foreign Key 2: mID REFERENCES Exhibition Material(mID)

5.3 Final Logical ERD
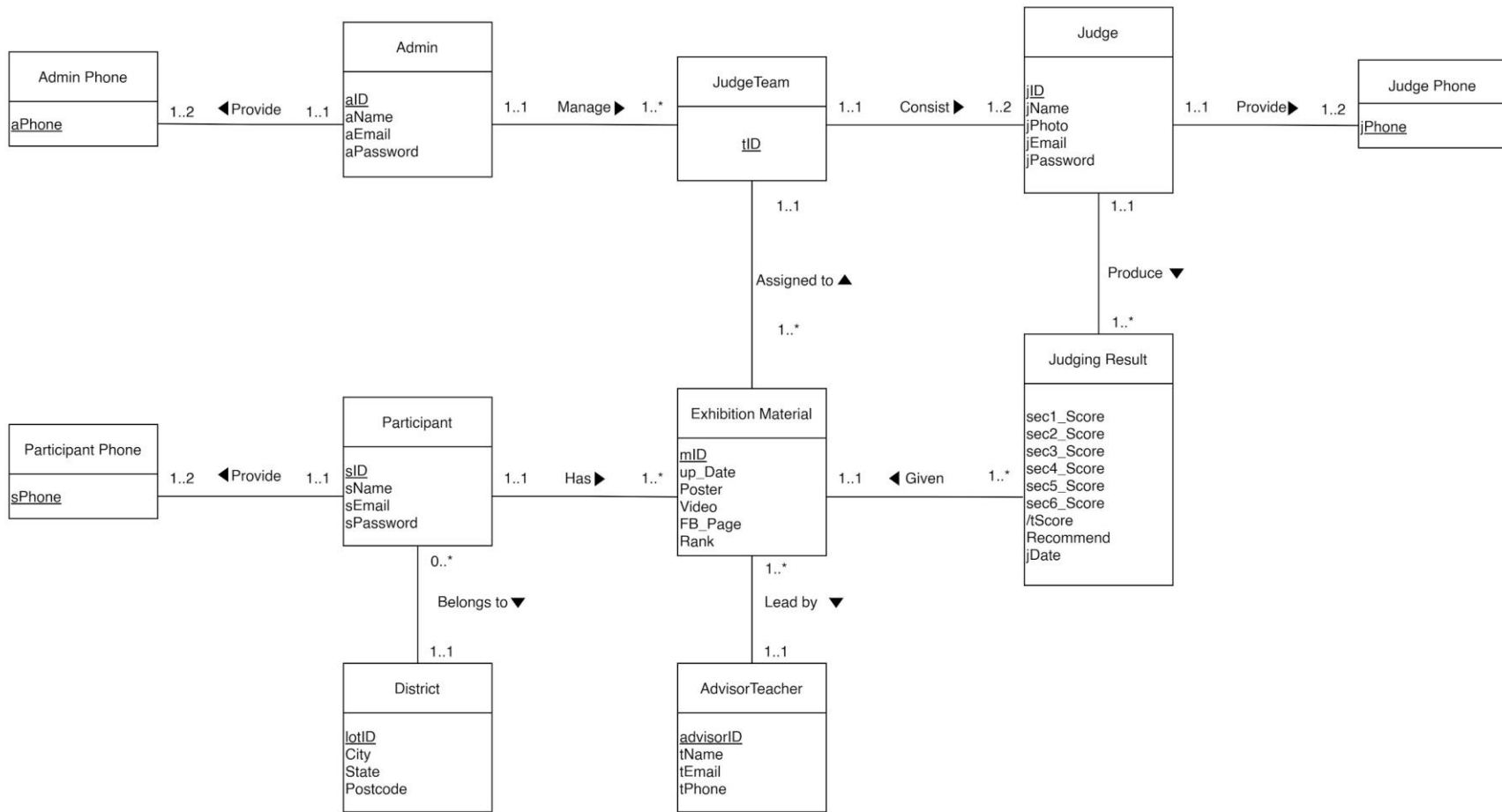
Figure 10: Final logical ERD

5.4 Final Data Dictionary

Entity Name	Attributes	Description	Datatype and Length	Nullity	Multi-valued
Admin	aID {PK} aName aEmail aPassword	Unique id for admin login Name of admin Unique Email Login password of admin	varchar2(10) varchar2(50) varchar2(50) varchar2(15)	No No No No	No No No No
Admin_Phone	aPhone {PK} aID	Unique phone number own by admin Foreign key references Admin(aID)	varchar2(11) varchar2(8)	No No	No No
JudgeTeam	tID {PK} aID	Unique ID of assigned judge team to evaluate which materials Foreign key references Admin(aID)	varchar2(10) varchar2(8)	No Yes	No No
Judge	jID{PK} jName jPhoto jEmail jPassword tID	Unique jID for judge login Name of judge Link of photo of judge Unique Email Login password for judge Foreign key references JudgeTeam(tID)	varchar2(8) varchar2(50) varchar2(200) varchar2(50) varchar2(15) varchar2(10)	No No No No No Yes	No No No No No No
Judge_Phone	jPhone {PK} jID	Unique phone number own by judge Foreign key references Judge(jID)	varchar2(11) varchar2(8)	No No	No No

District	lotID {PK}	Unique ID for district	varchar2(8)	No	No
	City	City of that location	varchar2(20)	No	No
	State	State of that location	varchar2(20)	No	No
	Postcode	Postcode of that location	varchar2(5)	No	No
Participant	sID {PK}	Unique id for school login	varchar2(8)	No	No
	sName	Name of school	varchar2(50)	No	No
	lotID	Foreign key references District(lotID)	varchar2(8)	No	No
	sEmail	Unique Email	varchar2(50)	No	No
	sPassword	Login password of school	varchar2(15)	No	No
Participant_Phone	sPhone {PK}	Unique phone number own by participating school	varchar2(11)	No	No
	sID	Foreign key references Participant(sID)	varchar2(8)	No	No
AdvisorTeacher	advisorID {PK}	Unique ID for advisor teacher	varchar2(8)	No	No
	tName	Name of advisor teacher	varchar2(50)	No	No
	tEmail	Email of advisor teacher	varchar2(50)	No	No
	tPhone	Phone number of advisor teacher	varchar2(11)	No	No

Exhibition _Material	mID {PK}	Unique ID assigned to material(s) of exhibition	varchar2(5)	No	No
	up_Date	Upload date that the material was sent into the system	Date	No	No
	advisorID	Foreign key references AdvisorTeacher(advisorID)	varchar2(8)	No	No
	Poster	Link of poster to be judged	varchar2(20)	No	No
	Video	Link of video to be judged	varchar2(20)	No	No
	FB_Page	Link of activities posted on Facebook	varchar2(20)	No	No
	Rank	Ranking in the competition	number(2)	No	No
	sID	Foreign key references Participant(sID)	varchar2(8)	No	No
	tID	Foreign key references JudgeTeam(tID)	varchar2(10)	Yes	No
Judging_Result	jID {PK}	Foreign key references Judge(jID)	varchar2(8)	No	No
	mID {PK}	Foreign key references Exhibition Material(mID)	varchar2(5)	No	No
	sec1_Score	Total score of first judging criteria	number(2)	No	No
	sec2_Score	Total score of second judging criteria	number(2)	No	No
	sec3_Score	Total score of third judging criteria	number(2)	No	No
	sec4_Score	Total score of fourth judging criteria	number(2)	No	No
	sec5_Score	Total score of fifth judging criteria	number(2)	No	No
	sec6_Score	Total score of sixth judging criteria	number(2)	No	No
	tScore	Derived total score for all criteria	number(4)	No	No
	Recommend	Recommendation for "Best of the Best Award"	number(1)	No	No
	jDate	Judging date	Date	No	No

6.0 Project Implementation

6.1 Table Creation

```
--Table Creation
CREATE TABLE Admin(
aID VARCHAR(8),
aName VARCHAR(50) NOT NULL,
aEmail VARCHAR2(50) UNIQUE NOT NULL,
aPassword VARCHAR2(15) NOT NULL,
PRIMARY KEY(aID)
);

CREATE TABLE AdminPhone(
aPhone VARCHAR2(11) PRIMARY KEY,
aID VARCHAR2(10) NOT NULL,
FOREIGN KEY(aID) REFERENCES Admin(aID) ON DELETE CASCADE
);

CREATE TABLE JudgeTeam(
tID VARCHAR2(10) PRIMARY KEY,
aID VARCHAR2(10),
FOREIGN KEY(aID) REFERENCES Admin(aID) ON DELETE SET NULL
);

CREATE TABLE Judge(
jID VARCHAR(8),
jName VARCHAR2(50) NOT NULL,
jPhoto VARCHAR2(200) NOT NULL,
jEmail VARCHAR2(50) UNIQUE NOT NULL,
jPassword VARCHAR2(15) NOT NULL,
tID VARCHAR2(10),
PRIMARY KEY(jID),
FOREIGN KEY(tID) REFERENCES JudgeTeam(tID) ON DELETE SET NULL
);

CREATE TABLE JudgePhone(
```

```sql
jPhone VARCHAR2(11) PRIMARY KEY,
jID VARCHAR2(10) NOT NULL,
FOREIGN KEY(jID) REFERENCES Judge(jID) ON DELETE CASCADE
);
create table district(
    lotID varchar(8) constraint district_pk primary key,
    street varchar(20),
    city varchar(15),
    postcode varchar(5)
);

create table participant
(
    sID varchar(8) constraint part_pk primary key,
    sName varchar(50),
    lotID varchar(8),
    sEmail varchar(50),
    sPassword varchar(15),
    FOREIGN KEY(lotID) REFERENCES District(lotID)
);

create table participantPhone
(
    sPhone varchar(11) constraint partPhone_pk primary key,
    sID varchar(8),
    constraint partPhone_sid_fk foreign key(sID) references
    participant(sID)
);

create table advisorTeacher
(
    advisorID varchar(8) constraint adv_pk primary key,
    tName varchar(50),
    tEmail varchar(50),
    tPhone varchar(11)
);

create table exhibitionMaterial
```

```
(
      mID varchar(5) constraint exhi_pk primary key,
      up_Date date,
      poster varchar(20),
      video varchar(20),
      fbPage varchar(20),
      sID varchar(8),
      tID varchar(8),
      advisorID varchar(8),
      rank number(2),
      constraint exhi_sid_fk foreign key(sID) references
      participant(sID),
      constraint exhi_tid_fk foreign key(tID) references
      judgeTeam(tID),
      constraint exhi_aid_fk foreign key(advisorID) references
      advisorTeacher(advisorID)
);
CREATE TABLE JudgingResult(
jID VARCHAR2(8),
mID VARCHAR2(5),
sec1_Score NUMBER(2) DEFAULT 0 CHECK(sec1_Score >=0),
sec2_Score NUMBER(2) DEFAULT 0 CHECK(sec2_Score >=0),
sec3_Score NUMBER(2) DEFAULT 0 CHECK(sec3_Score >=0),
sec4_Score NUMBER(2) DEFAULT 0 CHECK(sec4_Score >=0),
sec5_Score NUMBER(2) DEFAULT 0 CHECK(sec5_Score >=0),
sec6_Score NUMBER(2) DEFAULT 0 CHECK(sec6_Score >=0),
tScore NUMBER(3) as
(sec1_Score+sec2_Score+sec3_Score+sec4_Score+sec5_Score+sec6_Score),
Recommend NUMBER(1) NOT NULL,
jDate DATE DEFAULT SYSDATE NOT NULL,
PRIMARY KEY(jID, mID),
FOREIGN KEY(jID) REFERENCES Judge(jID) ON DELETE CASCADE,
FOREIGN KEY(mID) REFERENCES ExhibitionMaterial(mID) ON DELETE CASCADE
);
```

6.2 Insertion of Rows

```
--Insertion
--Admin
INSERT ALL
INTO Admin (aID,aName,aEmail,aPassword) VALUES ('A001', 'Mohd
Firdaus', 'mhddaus@gmail.com', '1234')
INTO Admin (aID,aName,aEmail,aPassword) VALUES ('A002','Fahmi
Fauzi','ff@hotmail.com','rCe2025')
INTO Admin (aID,aName,aEmail,aPassword) VALUES ('A003', 'John Cena',
'jc@gmail.com', '1234')
INTO Admin (aID,aName,aEmail,aPassword) VALUES ('A004', 'Upin',
'upin@gmail.com', '1234')
INTO Admin (aID,aName,aEmail,aPassword) VALUES ('A005', 'Ipin',
'ipin@gmail.com', '1234')
INTO Admin (aID,aName,aEmail,aPassword) VALUES ('A006', 'Tok Dalang',
'td@gmail.com', '1234')
INTO Admin (aID,aName,aEmail,aPassword) VALUES ('A007', 'Bruno Mars',
'bm@gmail.com', '1234')
INTO Admin (aID,aName,aEmail,aPassword) VALUES ('A008', 'Ehsan',
'ehsan@gmail.com', '1234')
INTO Admin (aID,aName,aEmail,aPassword) VALUES ('A009', 'Mei Mei',
'mm@gmail.com', '1234')
INTO Admin (aID,aName,aEmail,aPassword) VALUES ('A010', 'Opah',
'opah@gmail.com', '1234')
SELECT *FROM DUAL;

--AdminPhone
INSERT ALL
INTO AdminPhone (aPhone,aID) VALUES ('0173117571','A001')
INTO AdminPhone (aPhone,aID) VALUES ('0173117572','A002')
INTO AdminPhone (aPhone,aID) VALUES ('0173117573','A003')
INTO AdminPhone (aPhone,aID) VALUES ('0173117574','A004')
INTO AdminPhone (aPhone,aID) VALUES ('0173117575','A005')
INTO AdminPhone (aPhone,aID) VALUES ('0173117576','A006')
INTO AdminPhone (aPhone,aID) VALUES ('0173117577','A007')
INTO AdminPhone (aPhone,aID) VALUES ('0173117578','A008')
INTO AdminPhone (aPhone,aID) VALUES ('0173117579','A009')
INTO AdminPhone (aPhone,aID) VALUES ('0173117510','A010')
```

```
SELECT *FROM DUAL;

--JudgeTeam
INSERT ALL
INTO JudgeTeam (tID,aID) VALUES ('JT001','A001')
INTO JudgeTeam (tID,aID) VALUES ('JT002','A001')
INTO JudgeTeam (tID,aID) VALUES ('JT003','A003')
INTO JudgeTeam (tID,aID) VALUES ('JT004','A002')
INTO JudgeTeam (tID,aID) VALUES ('JT005','A003')
INTO JudgeTeam (tID,aID) VALUES ('JT006','A005')
INTO JudgeTeam (tID,aID) VALUES ('JT007','A006')
INTO JudgeTeam (tID,aID) VALUES ('JT008','A007')
INTO JudgeTeam (tID,aID) VALUES ('JT009','A008')
INTO JudgeTeam (tID,aID) VALUES ('JT010','A009')
SELECT *FROM DUAL;

--Judge
INSERT ALL
INTO Judge (jID,jName,jPhoto,jEmail,jPassword,tID) VALUES ('J001','Dr.
Nada','C:\Users\upin\Pictures\photo1.jpg','nada@utm.my','rCej001','JT001')
INTO Judge (jID,jName,jPhoto,jEmail,jPassword,tID) VALUES ('J002','Dr.
Umar','C:\Users\upin\Pictures\photo2.jpg','umar@utm.my','rCej002','JT002')
INTO Judge (jID,jName,jPhoto,jEmail,jPassword,tID) VALUES ('J003','Dr.
Irma','C:\Users\upin\Pictures\photo3.jpg','irma@utm.my','rCej003','JT001')
INTO Judge (jID,jName,jPhoto,jEmail,jPassword,tID) VALUES ('J004','Dr.
Yani','C:\Users\upin\Pictures\photo4.jpg','yani@utm.my','rCej004','JT002')
INTO Judge (jID,jName,jPhoto,jEmail,jPassword,tID) VALUES ('J005','Dr.
Amir','C:\Users\upin\Pictures\photo5.jpg','amir@utm.my','rCej005','JT001')
INTO Judge (jID,jName,jPhoto,jEmail,jPassword,tID) VALUES ('J006','Dr.
Ros','C:\Users\upin\Pictures\photo6.jpg','ros@utm.my','rCej006','JT002')
INTO Judge (jID,jName,jPhoto,jEmail,jPassword,tID) VALUES ('J007','Dr.
Ismail','C:\Users\upin\Pictures\photo7.jpg','mail@utm.my','rCej007','JT003')
INTO Judge (jID,jName,jPhoto,jEmail,jPassword,tID) VALUES ('J008','Dr.
Fizi','C:\Users\upin\Pictures\photo8.jpg','fizi@utm.my','rCej008','JT003')
INTO Judge (jID,jName,jPhoto,jEmail,jPassword,tID) VALUES ('J009','Dr.
Salleh','C:\Users\upin\Pictures\photo9.jpg','salleh@utm.my','rCej009','JT003')
INTO Judge (jID,jName,jPhoto,jEmail,jPassword,tID) VALUES ('J010','Dr.
Ijat','C:\Users\upin\Pictures\photo10.jpg','ijat@utm.my','rCej010','JT004')
```

```
SELECT *FROM DUAL;

--JudgePhone
INSERT ALL
INTO JudgePhone (jPhone,jID) VALUES ('01126144905','J001')
INTO JudgePhone (jPhone,jID) VALUES ('0189672954','J002')
INTO JudgePhone (jPhone,jID) VALUES ('0138734195','J003')
INTO JudgePhone (jPhone,jID) VALUES ('0166094653','J004')
INTO JudgePhone (jPhone,jID) VALUES ('0127785932','J005')
INTO JudgePhone (jPhone,jID) VALUES ('01126144901','J006')
INTO JudgePhone (jPhone,jID) VALUES ('0189672952','J007')
INTO JudgePhone (jPhone,jID) VALUES ('0138734193','J008')
INTO JudgePhone (jPhone,jID) VALUES ('0166094654','J009')
INTO JudgePhone (jPhone,jID) VALUES ('0127785935','J010')
SELECT *FROM DUAL;

--District
INSERT ALL
INTO District (lotID,Street,City,Postcode) VALUES ('D917','Jalan
Molek','Johor Bahru','81100')
INTO District (lotID,Street,City,Postcode) VALUES ('F907','Jalan
Mawar','Johor Bahru','81100')
INTO District (lotID,Street,City,Postcode) VALUES ('A114','Jalan
Duku','Plentong','81750')
INTO District (lotID,Street,City,Postcode) VALUES ('E363','Jalan
Sinar','Skudai','81300')
INTO District (lotID,Street,City,Postcode) VALUES ('Z883','Jalan
Resak','Ulu Tiram','81500')
INTO District (lotID,Street,City,Postcode) VALUES ('D916','Jalan
Durian','Pulai','81300')
INTO District (lotID,Street,City,Postcode) VALUES ('F905','Jalan
Adil','Kluang','86000')
INTO District (lotID,Street,City,Postcode) VALUES ('A112','Jalan
Muar','Yong Peng','83700')
INTO District (lotID,Street,City,Postcode) VALUES ('E369','Jalan
Nesa','Chaah','84500')
INTO District (lotID,Street,City,Postcode) VALUES ('Z880','Jalan
Besar','Pagoh','84600')
```

```
SELECT *FROM DUAL;

--AdvisorTeacher
INSERT ALL
INTO AdvisorTeacher (advisorID,tName,tEmail) VALUES ('T001','Munirah
Hamid','munirah@kpm.my')
INTO AdvisorTeacher (advisorID,tName,tEmail) VALUES ('T002','Amran
Mokhtar','amran@kpm.my')
INTO AdvisorTeacher (advisorID,tName,tEmail) VALUES ('T003','Hamdan
Kusi','hamdan@kpm.my')
INTO AdvisorTeacher (advisorID,tName,tEmail) VALUES ('T004','Radhwan
Kabir','radhwan@kpm.my')
INTO AdvisorTeacher (advisorID,tName,tEmail) VALUES ('T005','Fatiyah
Hawa','fatiyah@kpm.my')
INTO AdvisorTeacher (advisorID,tName,tEmail) VALUES
('T006','Yaya','yaya@kpm.my')
INTO AdvisorTeacher (advisorID,tName,tEmail) VALUES
('T007','Fang','fang@kpm.my')
INTO AdvisorTeacher (advisorID,tName,tEmail) VALUES
('T008','Zola','zola@kpm.my')
INTO AdvisorTeacher (advisorID,tName,tEmail) VALUES ('T009','Kan
Sano','kan@kpm.my')
INTO AdvisorTeacher (advisorID,tName,tEmail) VALUES
('T010','Kirijin','kirijin@kpm.my')
SELECT *FROM DUAL;

--Participant
INSERT ALL
INTO Participant (sID,sName,lotID,sEmail,sPassword) VALUES
('P001','SMK Mawar','D917','smkmawar@gmail.com','rCep001')
INTO Participant (sID,sName,lotID,sEmail,sPassword) VALUES
('P002','SMK Tanjung','F907','smktanjung@yahoo.com','rCep002')
INTO Participant (sID,sName,lotID,sEmail,sPassword) VALUES
('P003','MRSM JB','A114','mrsmjb@yahoo.com','rCep003')
INTO Participant (sID,sName,lotID,sEmail,sPassword) VALUES
('P004','SMKA JB','E363','smkajb@gmail.com','rCep004')
INTO Participant (sID,sName,lotID,sEmail,sPassword) VALUES
('P005','SMK Pulai','Z883','smkpulai@hotmail.com','rCep005')
```

```
INTO Participant (sID,sName,lotID,sEmail,sPassword) VALUES
('P006','SMK Pulai','D916','smkpulai@gmail.com','rCep001')
INTO Participant (sID,sName,lotID,sEmail,sPassword) VALUES
('P007','SMK Kluang','F905','smkkluang@yahoo.com','rCep002')
INTO Participant (sID,sName,lotID,sEmail,sPassword) VALUES
('P008','SJK(C) Yong Peng','A112','sjkcyp@yahoo.com','rCep003')
INTO Participant (sID,sName,lotID,sEmail,sPassword) VALUES
('P009','SMKA Chaah','E369','smkachaah@gmail.com','rCep004')
INTO Participant (sID,sName,lotID,sEmail,sPassword) VALUES
('P010','SMK Pagoh','Z883','smkpulai@hotmail.com','rCep005')
SELECT *FROM DUAL;

--ParticipantPhone
INSERT ALL
INTO ParticipantPhone (sPhone,sID) VALUES ('01134156672','P001')
INTO ParticipantPhone (sPhone,sID) VALUES ('01134166672','P002')
INTO ParticipantPhone (sPhone,sID) VALUES ('01134186672','P003')
INTO ParticipantPhone (sPhone,sID) VALUES ('01134196672','P004')
INTO ParticipantPhone (sPhone,sID) VALUES ('01134106672','P005')
INTO ParticipantPhone (sPhone,sID) VALUES ('01134156671','P006')
INTO ParticipantPhone (sPhone,sID) VALUES ('01134166673','P007')
INTO ParticipantPhone (sPhone,sID) VALUES ('01134186674','P008')
INTO ParticipantPhone (sPhone,sID) VALUES ('01134196675','P009')
INTO ParticipantPhone (sPhone,sID) VALUES ('01134106676','P010')
SELECT *FROM DUAL;

--ExhibitionMaterial
INSERT ALL
INTO ExhibitionMaterial(mID, uP_Date, poster, video, fbPage, sID, tID,
advisorID) VALUES ('M001',DATE'2020-11-25','https://bit.ly/3jpp2',
'https://bit.ly/3jpp3', 'https://bit.ly/3jpp4', 'P001', 'JT001',
'T001')
INTO ExhibitionMaterial(mID, uP_Date, poster, video, fbPage, sID, tID,
advisorID) VALUES ('M002',DATE'2020-11-25','https://bit.ly/3jpp2',
'https://bit.ly/3jpp3', 'https://bit.ly/3jpp4', 'P002', 'JT001',
'T002')
INTO ExhibitionMaterial(mID, uP_Date, poster, video, fbPage, sID, tID,
advisorID) VALUES ('M003',DATE'2020-11-25','https://bit.ly/3jpp2',
```

```sql
'https://bit.ly/3jpp3', 'https://bit.ly/3jpp4', 'P003', 'JT001',
'T003')
INTO ExhibitionMaterial(mID, uP_Date, poster, video, fbPage, sID, tID,
advisorID) VALUES ('M004',DATE'2020-11-25','https://bit.ly/3jpp2',
'https://bit.ly/3jpp3', 'https://bit.ly/3jpp4', 'P004', 'JT001',
'T004')
INTO ExhibitionMaterial(mID, uP_Date, poster, video, fbPage, sID, tID,
advisorID) VALUES ('M005',DATE'2020-11-25','https://bit.ly/3jpp2',
'https://bit.ly/3jpp3', 'https://bit.ly/3jpp4', 'P005', 'JT001',
'T005')
INTO ExhibitionMaterial(mID, uP_Date, poster, video, fbPage, sID, tID,
advisorID) VALUES ('M006',DATE'2020-11-25','https://bit.ly/3jpp2',
'https://bit.ly/3jpp3', 'https://bit.ly/3jpp4', 'P006', 'JT002',
'T006')
INTO ExhibitionMaterial(mID, uP_Date, poster, video, fbPage, sID, tID,
advisorID) VALUES ('M007',DATE'2020-11-25','https://bit.ly/3jpp2',
'https://bit.ly/3jpp3', 'https://bit.ly/3jpp4', 'P007', 'JT002',
'T007')
INTO ExhibitionMaterial(mID, uP_Date, poster, video, fbPage, sID, tID,
advisorID) VALUES ('M008',DATE'2020-11-25','https://bit.ly/3jpp2',
'https://bit.ly/3jpp3', 'https://bit.ly/3jpp4', 'P008', 'JT002',
'T008')
INTO ExhibitionMaterial(mID, uP_Date, poster, video, fbPage, sID, tID,
advisorID) VALUES ('M009',DATE'2020-11-25','https://bit.ly/3jpp2',
'https://bit.ly/3jpp3', 'https://bit.ly/3jpp4', 'P009', 'JT003',
'T009')
INTO ExhibitionMaterial(mID, uP_Date, poster, video, fbPage, sID, tID,
advisorID) VALUES ('M010',DATE'2020-11-25','https://bit.ly/3jpp2',
'https://bit.ly/3jpp3', 'https://bit.ly/3jpp4', 'P010', 'JT003',
'T010')
SELECT *FROM DUAL;

--JudgingResult
INSERT ALL
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J001','M001',20,15,10,12,18,12,1,DATE'2021-12-05')
```

```
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J003','M001',18,13,10,12,8,12,0,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J005','M002',23,15,19,12,18,15,1,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J001','M002',6,15,10,19,18,12,0,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J005','M003',20,15,20,12,18,12,1,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J002','M006',20,17,10,12,15,12,1,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J004','M006',20,14,15,12,18,12,0,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J002','M007',20,20,10,17,18,12,1,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J006','M007',20,15,10,12,9,12,0,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J003','M003',20,10,10,12,10,12,0,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
```

```
core,Recommend,jDate) VALUES
('J005','M004',20,10,10,18,10,14,0,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J003','M005',16,10,13,12,10,12,1,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J005','M005',20,20,20,12,10,12,1,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J006','M008',20,10,20,12,10,12,0,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J004','M008',15,16,19,12,10,13,1,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J007','M009',20,10,20,16,10,12,1,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J009','M009',20,20,11,11,10,12,0,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate) VALUES
('J007','M010',20,10,19,12,11,12,0,DATE'2021-12-05')
INTO JudgingResult
(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5_Score,sec6_S
core,Recommend,jDate)
VALUES('J008','M010',11,10,11,12,20,11,0,DATE'2021-12-05')
INTO
JudgingResult(jID,mID,sec1_Score,sec2_Score,sec3_Score,sec4_Score,sec5
_Score,sec6_Score,Recommend,jDate) VALUES
('J001','M004',11,10,11,12,20,12,0,DATE'2021-12-05')
```

```sql
SELECT *FROM DUAL;

--Query
--fix
create view calcScore
as
select row_number()
over (order by finalScore desc) as rank, mID, finalScore
from
(
select distinct mID,
sum(tScore) over (partition by mID) as finalScore
from JudgingResult
);
--fix2
create view pRank
as
select t2.rank, t3.sID, t3.sName, t2.mID, t1.finalScore
from calcScore t1
join exhibitionMaterial t2
on t1.mID = t2.mID
join participant t3
on t2.sID = t3.sID
order by rank;
--update
update exhibitionMaterial
set rank = (select rank from calcScore where exhibitionMaterial.mID =
calcScore.mID)
where exists (select rank from calcScore where exhibitionMaterial.mID
= calcScore.mID);
```

6.3 System Prototype Interface

Figure 11: Admin (left) and Judge (right) Registration Interface
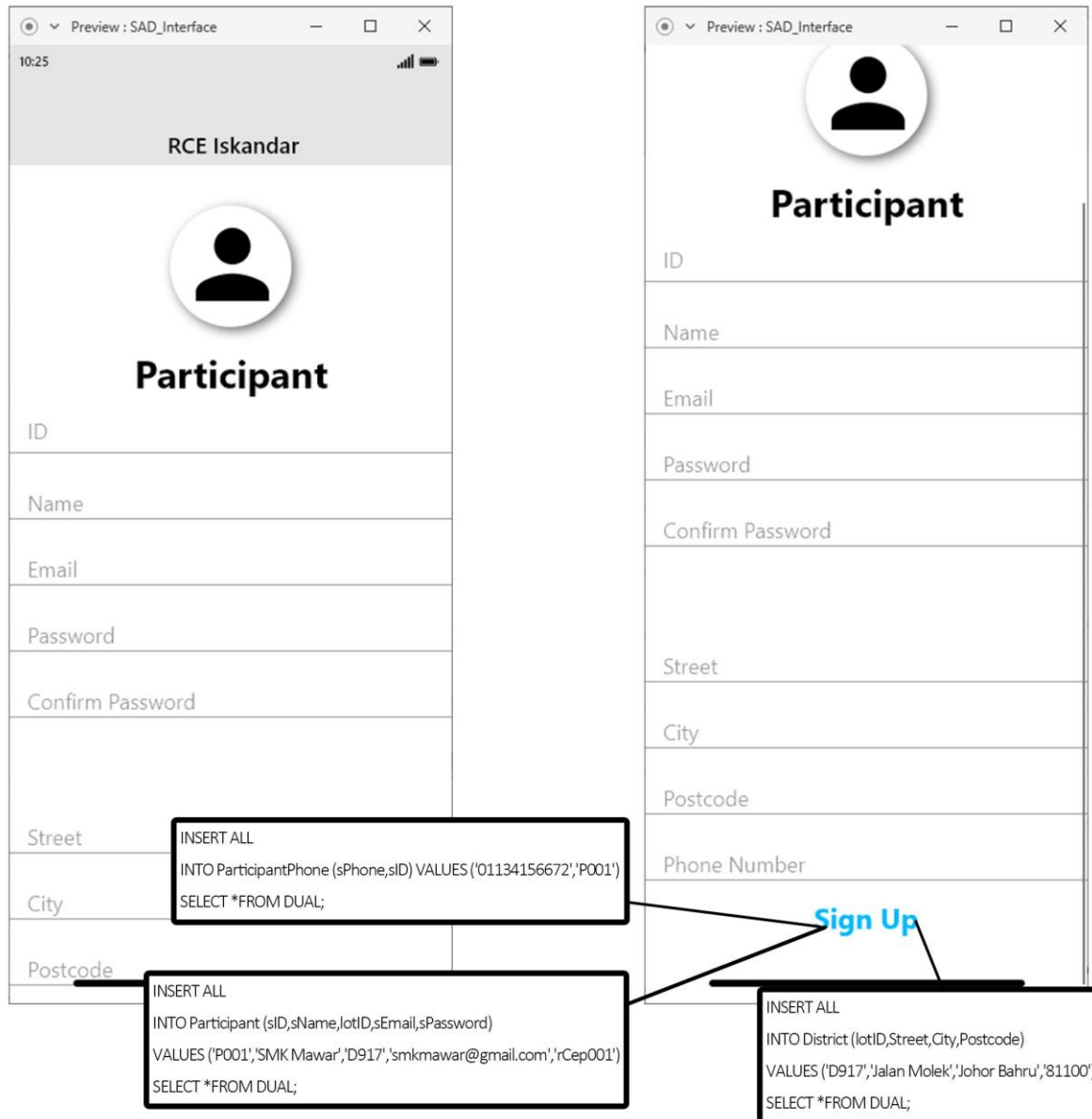
Figure 12: Participating school registration page
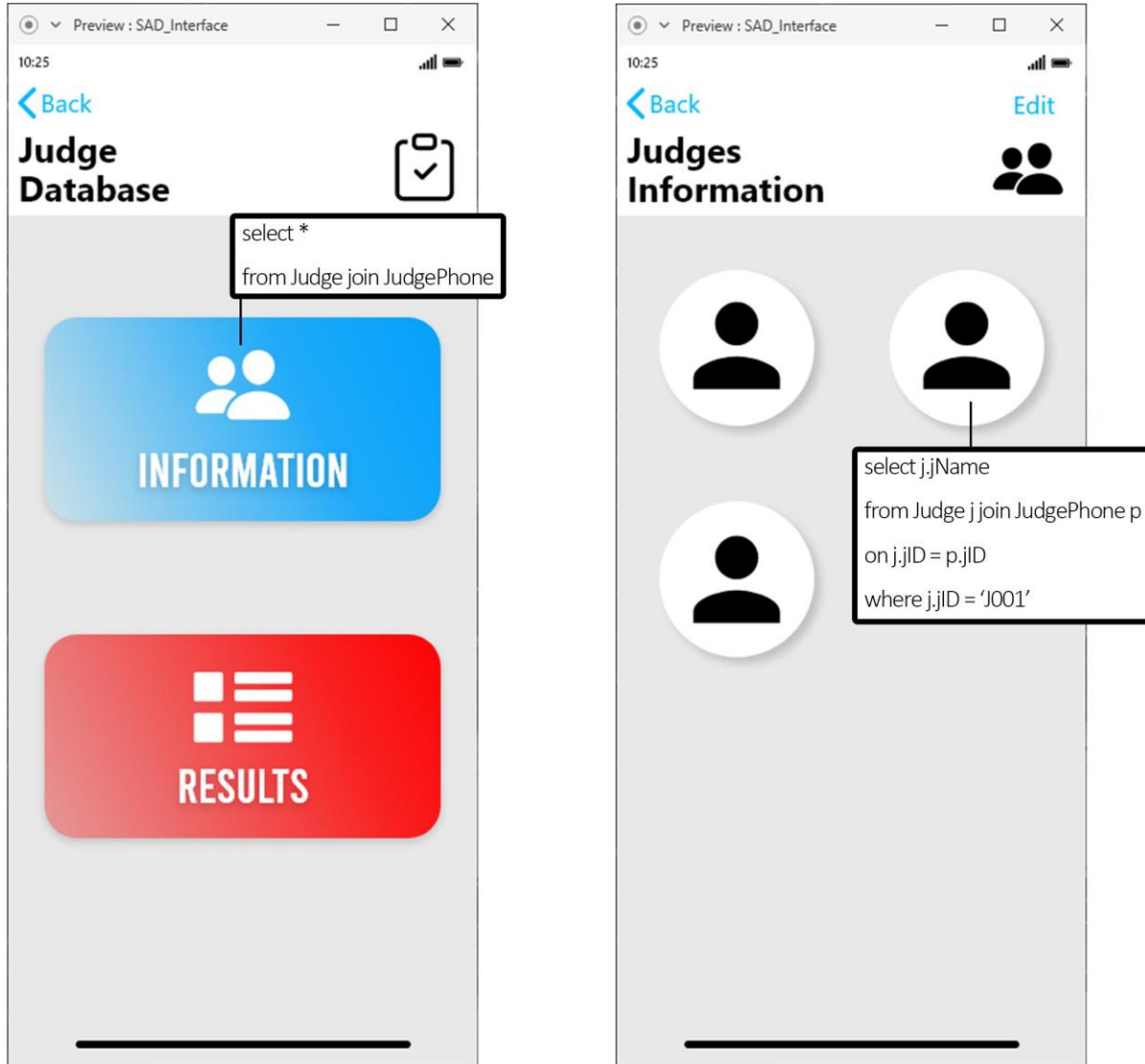
Figure 13: Viewing judges' Information by Admin
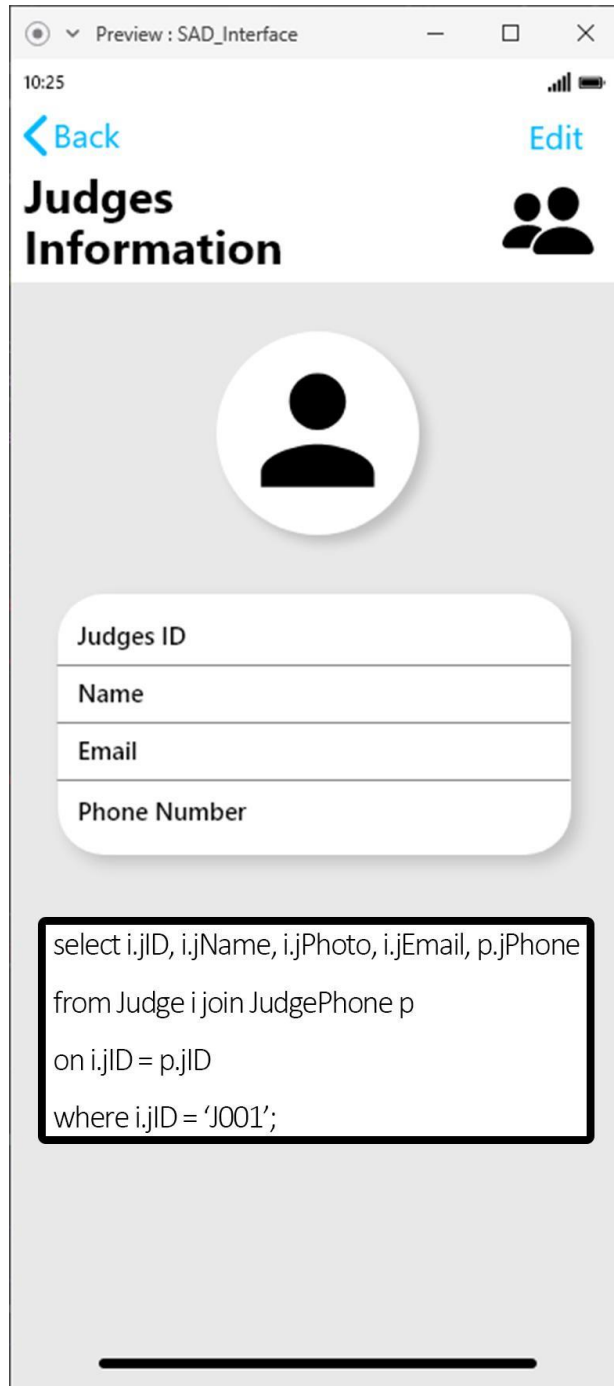
Figure 14: Viewing particular judge's information
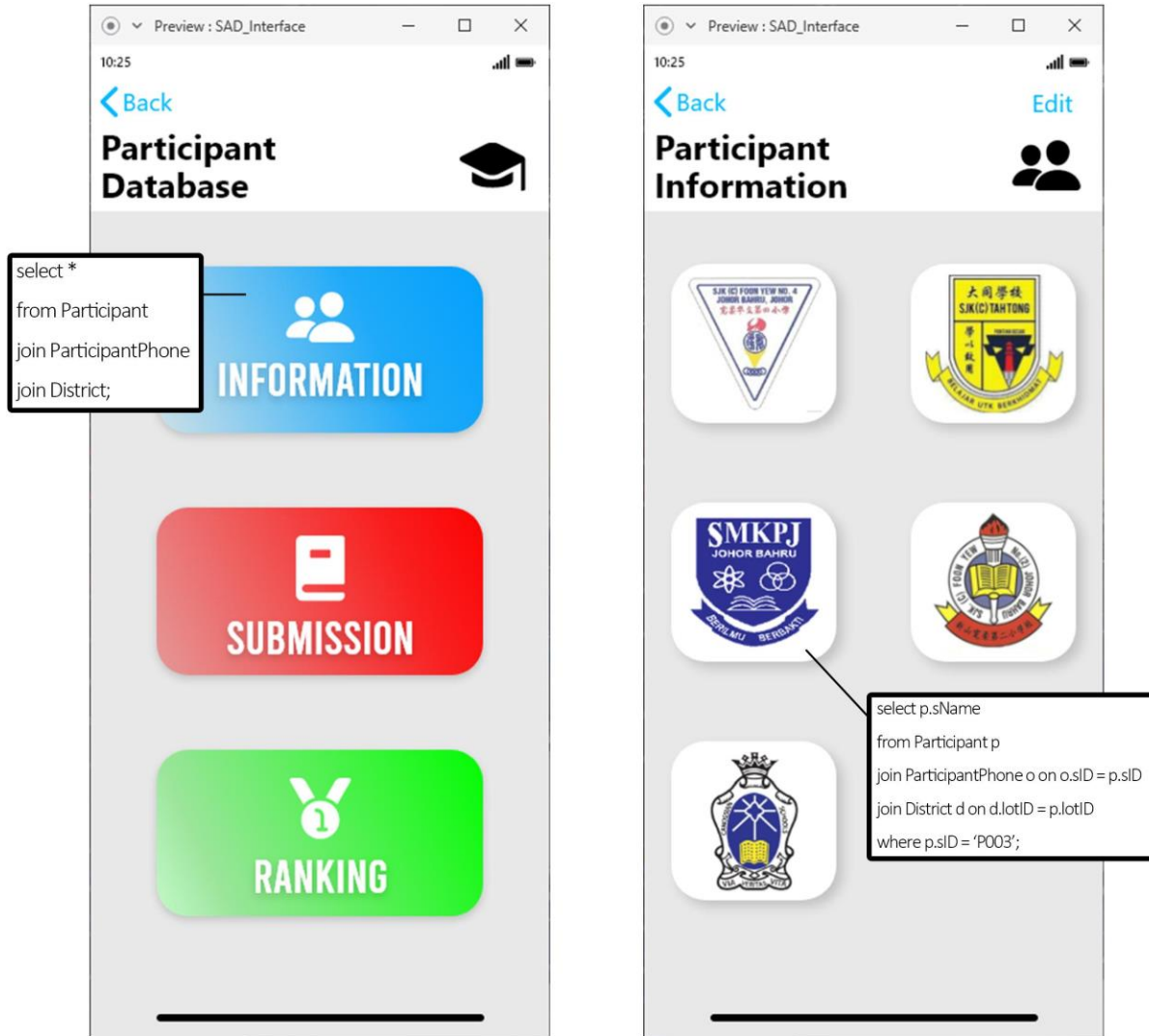
Figure 15: Viewing participating schools' information by Admin
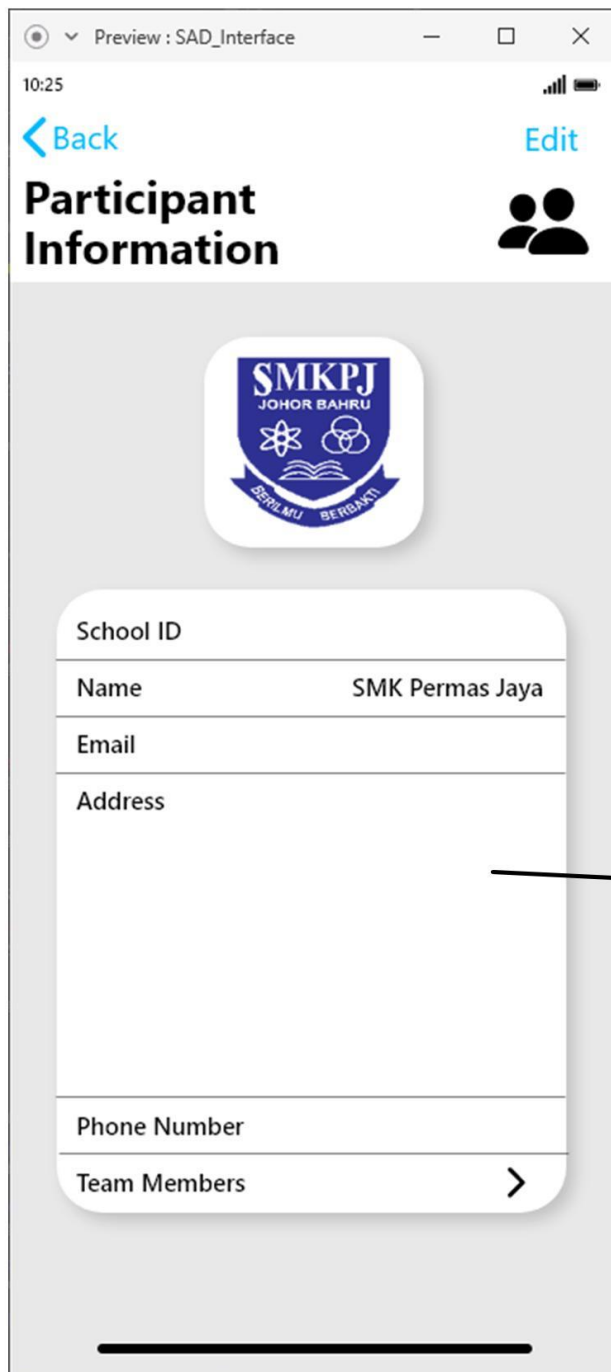
Figure 16: Viewing a particular participating school information
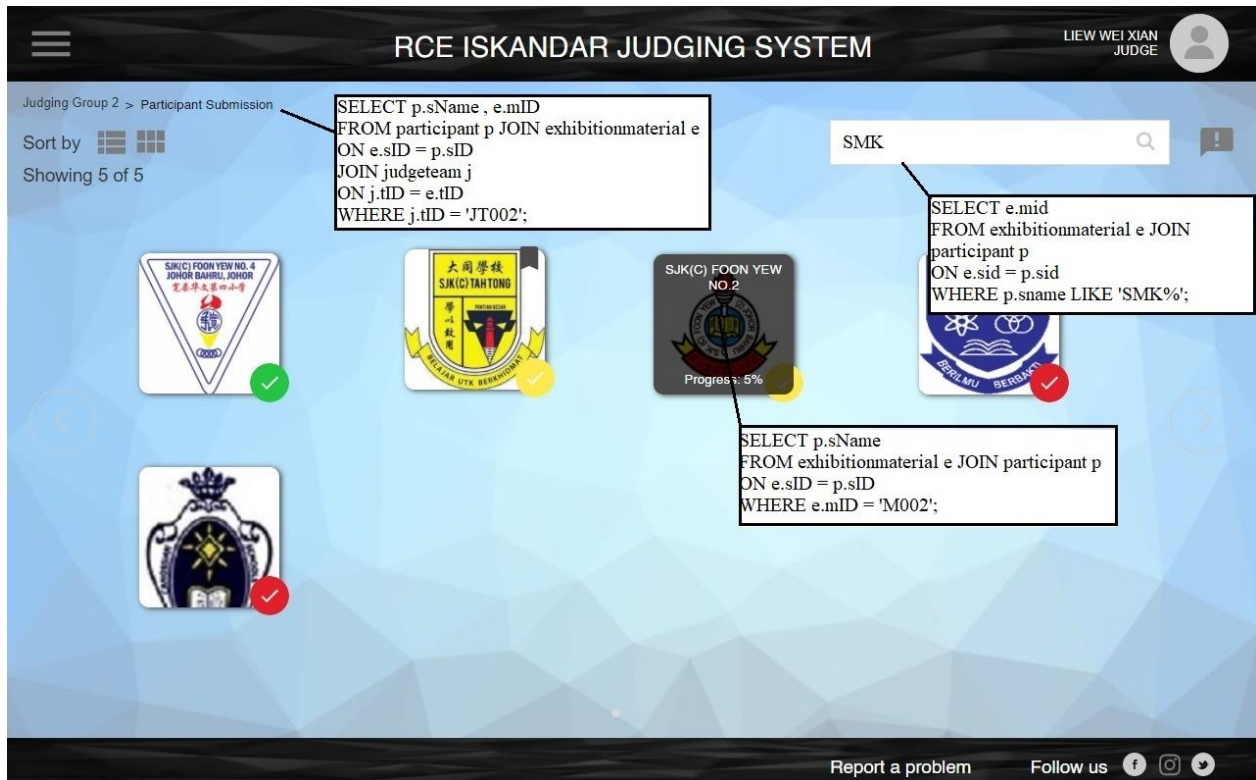
Figure 17: Judge main menu

Figure above shows the judge main menu in the system prototype where the judge will be directly brought into this interface where all the exhibition material submissions assigned to the judge's judging team are being displayed. When the mouse cursor hovers over the school icon, the name of the participating school name and the judging progress will be displayed. The judge can also look for a particular school by entering keywords inside the search bar. When the judge clicks on one of the icons shown there, the judge will be directed to Figure 2.
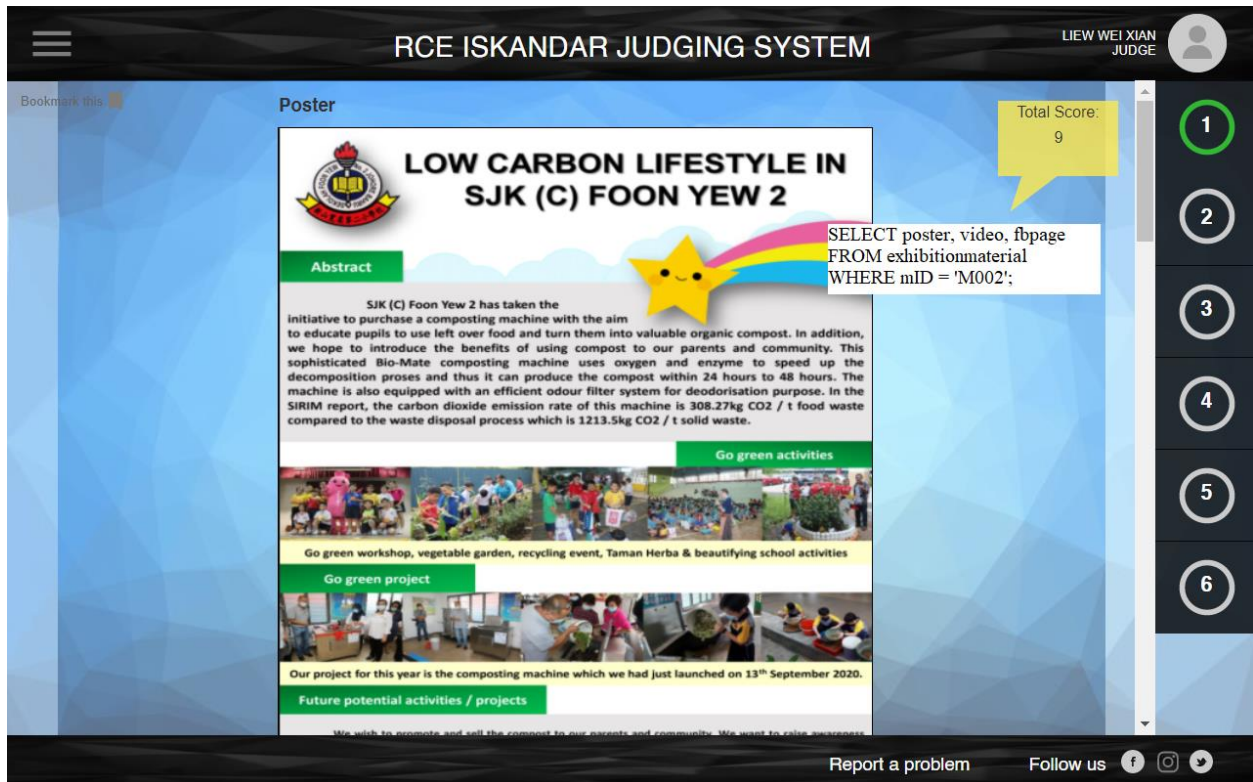
Figure 18: Participating school exhibition submission + judging interface

Figure 2 shows the judging interface of the system prototype. This interface will show the poster, video and fb page showing posts about their activities along with the judging panel. There are a total of 6 sections in the judging panel (where the recommendation for "Best of the Best' award reply is included in section 6).

Figure 19:Judging Panel

Figure 3 shows the judging panel of the judging interface. Once the judge clicks on one of the judging sections, the respective subsections will appear. Anyway, the database will take the total of all subsections scores as the score for that judging section. In this case the score for the first subsection is 4 while the second is 5, this will insert a total score of 9 into the first section (sec1_Score)' score. At the sametime it will update the judging date as well.
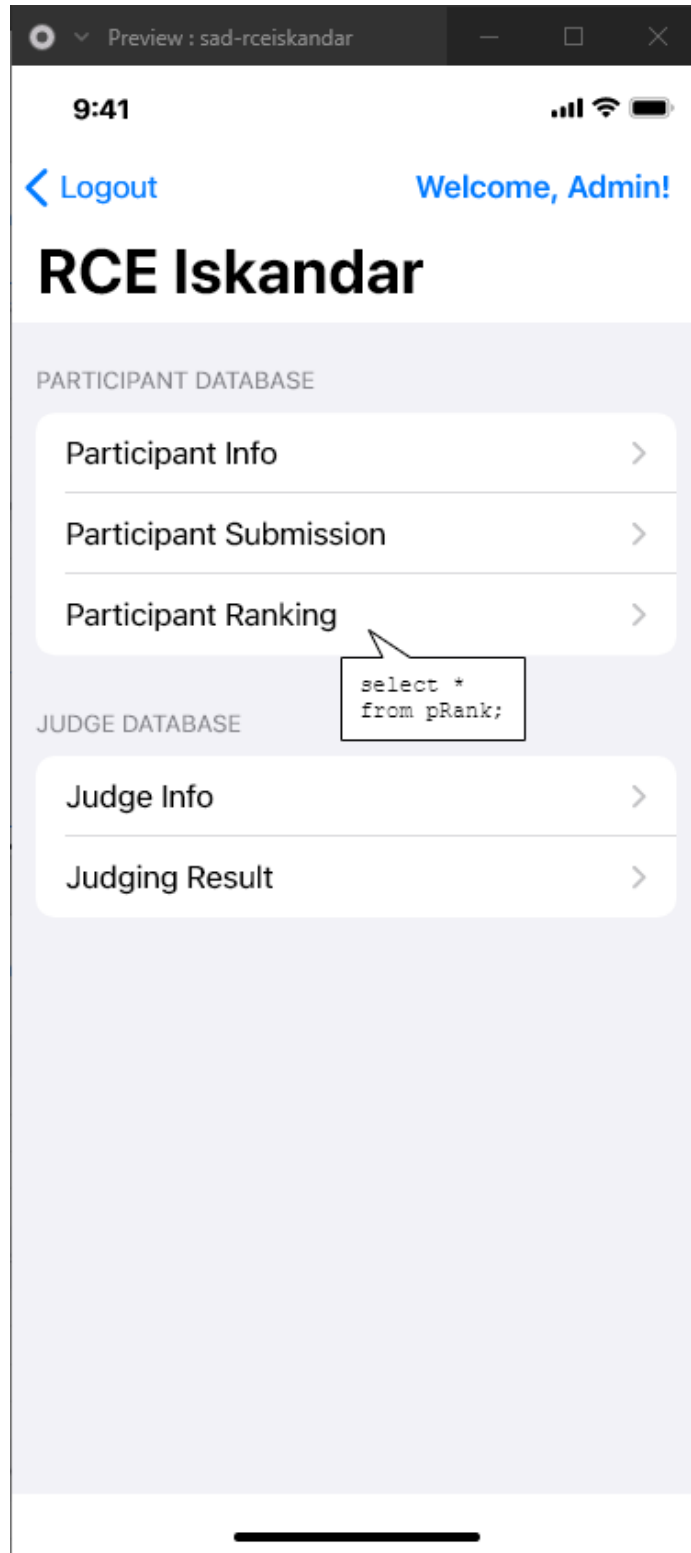
Figure 20: Judging result evaluation interface for Admin
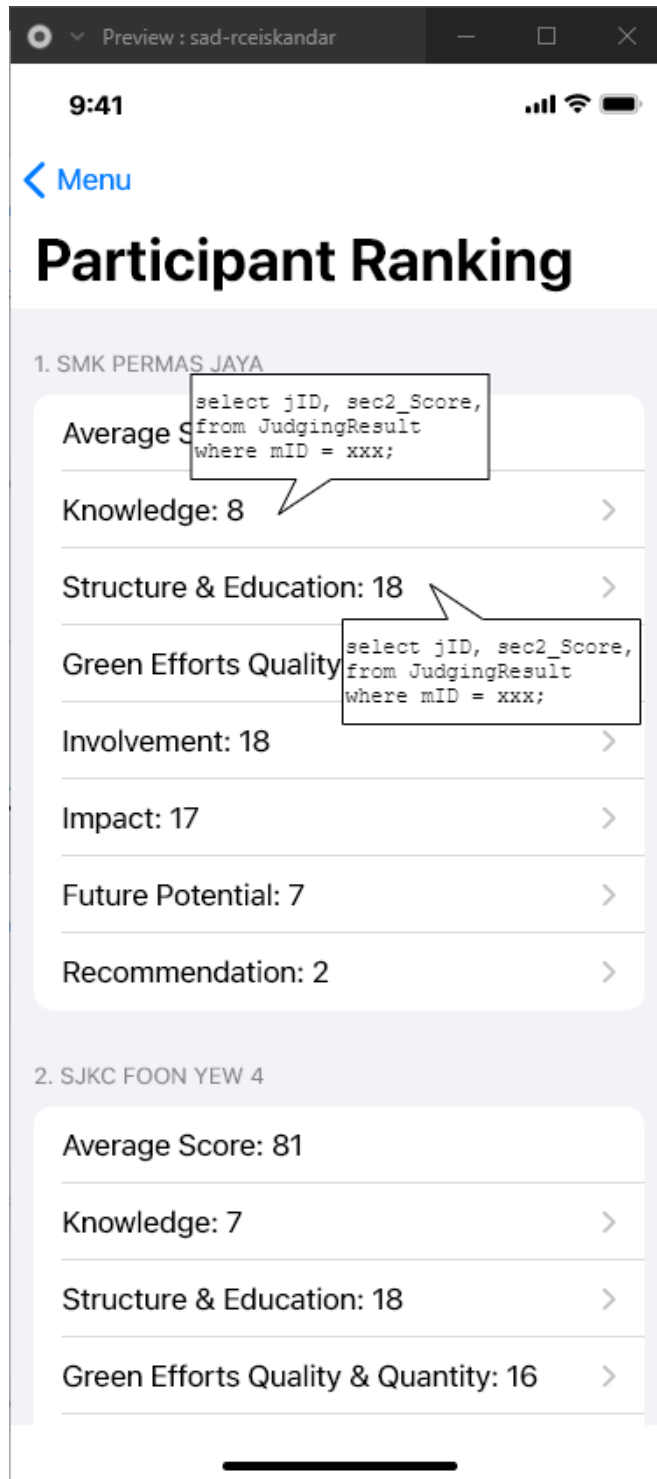
Figure 21: Judging result interface

```
INSERT INTO Participant
(sID, sPassword)
VALUES ('P001','rCep001')
```
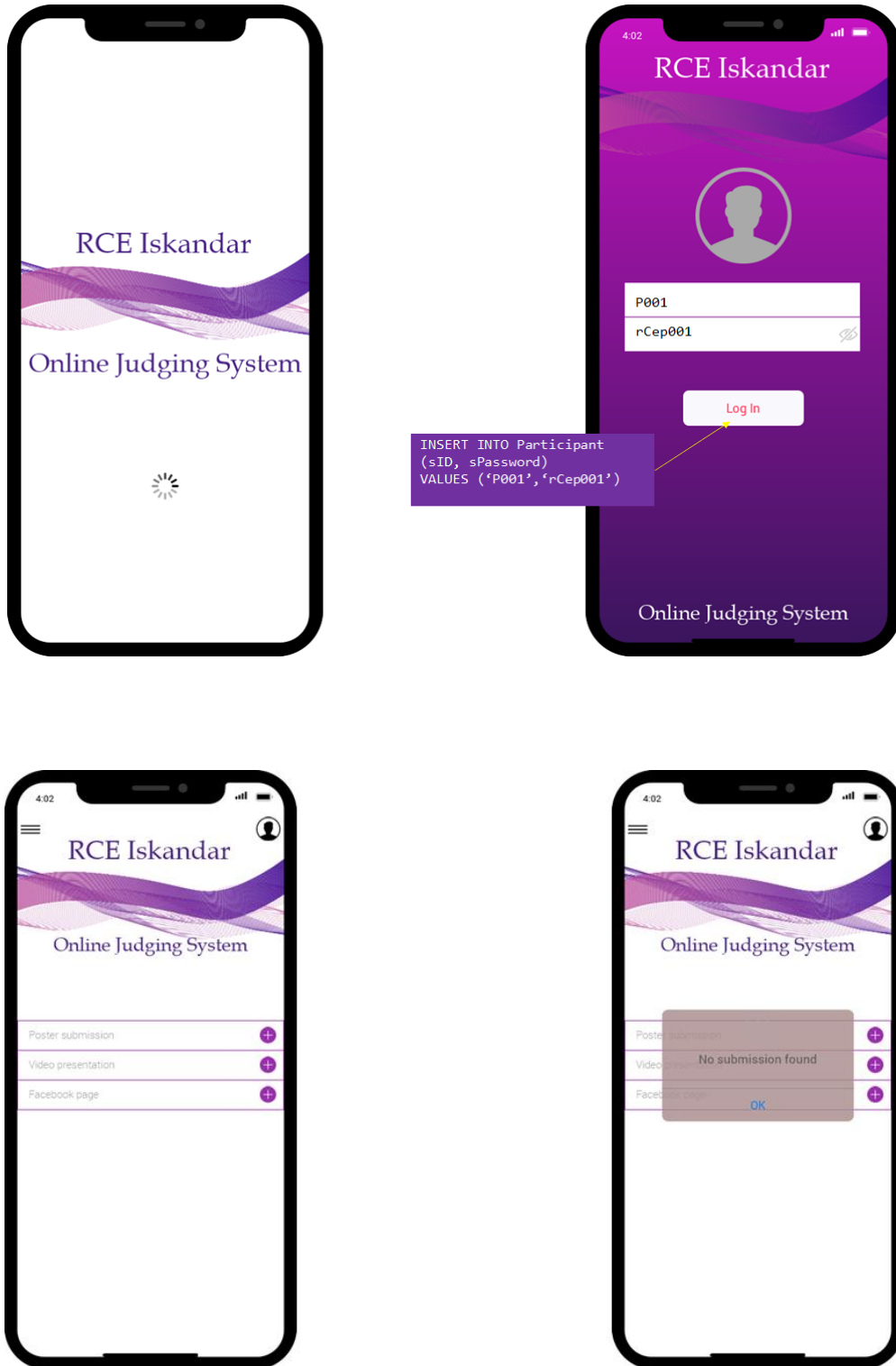
Figure 22: User login interface
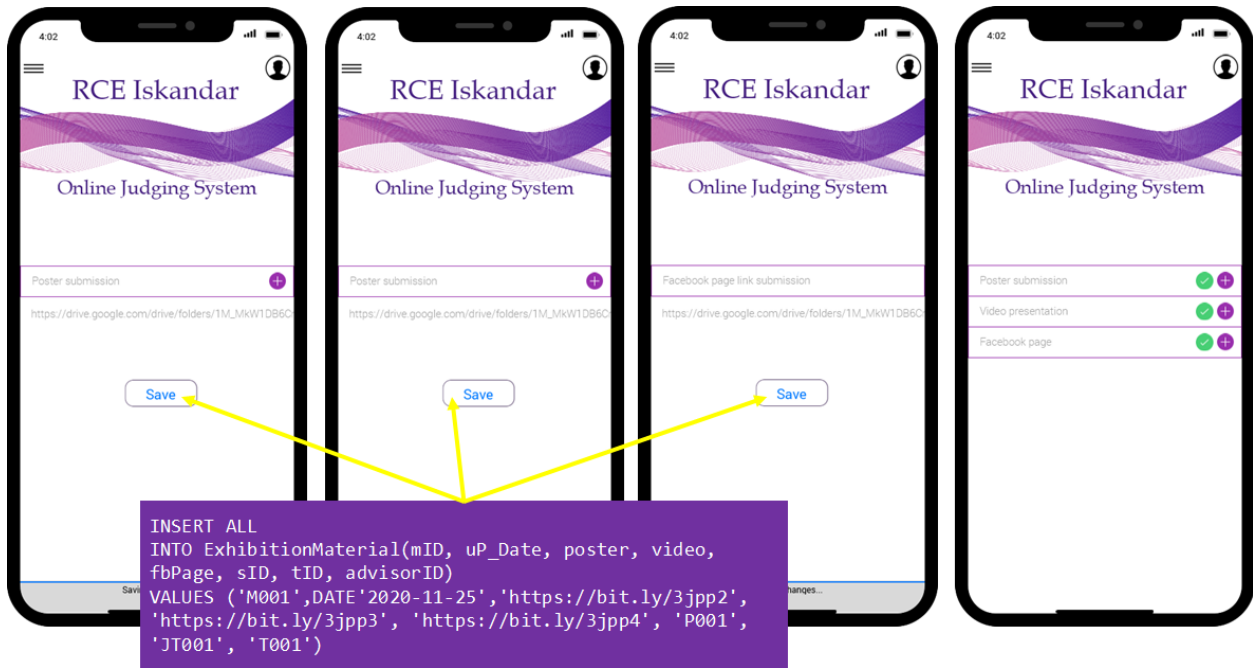
Figure 23: Exhibition material submission interface for Participant

6.4 Set of Queries for each transaction

1. [3 Table] Display participating school's submissions assigned to JudgingTeam "JY002"

```
SELECT p.sName, e.mID
FROM participant p JOIN exhibitionmaterial e
ON e.sID = p.sID
JOIN judgeteam j
ON j.tID = e.tID
WHERE j.tID = 'JT002';
```

SNAME	MID
SMK Pulai	M006
SMK Kluang	M007
SJK(C) Yong Peng	M008

2. [2 Table] Display searching result with keyword "SMK" inserted

```
SELECT e.mID
FROM exhibitionmaterial e JOIN participant p
ON e.sID = p.sID
WHERE p.sName LIKE 'SMK%';
```

MID
M001
M002
M004
M005
M006
M007
M009
M010

3. [2 Table] Display the name of the participating school of exhibition material "M002"

```
SELECT p.sName
FROM exhibitionmaterial e JOIN participant p
ON e.sID = p.sID
WHERE e.mID = 'M002';
```

SNAME
SMK Tanjung

4. [1 Table] Display the video, poster and Facebook page of exhibition material "M002"

```
SELECT poster, video, fbpage
FROM exhibitionmaterial
WHERE mID = 'M002';
```

POSTER	VIDEO	FBPAGE
https://bit.ly/3jpp2	https://bit.ly/3jpp3	https://bit.ly/3jpp4

5. [1 Table] Display material rank, school ID, school name, material ID, and final score

6. [1 Table] Display participant exhibition material score per section

7. [1 Table] Insert data for admin

8. [1 Table] Insert data for admin phone
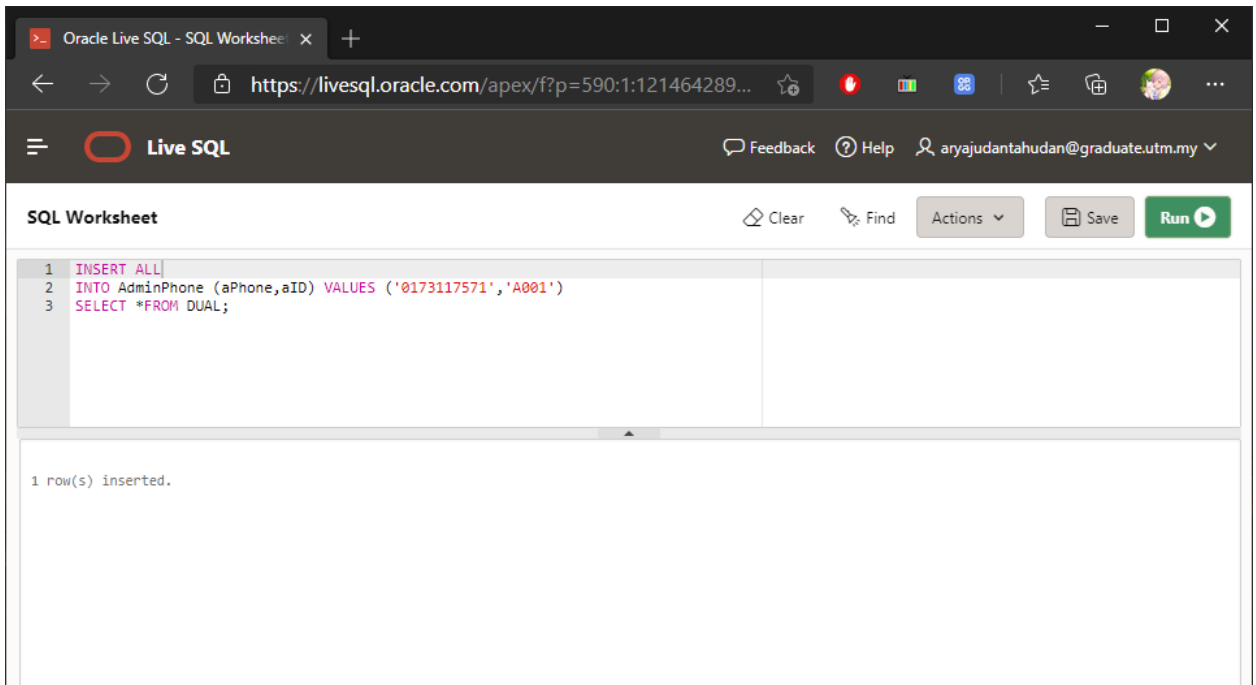
9. [1 Table] Insert data for judge
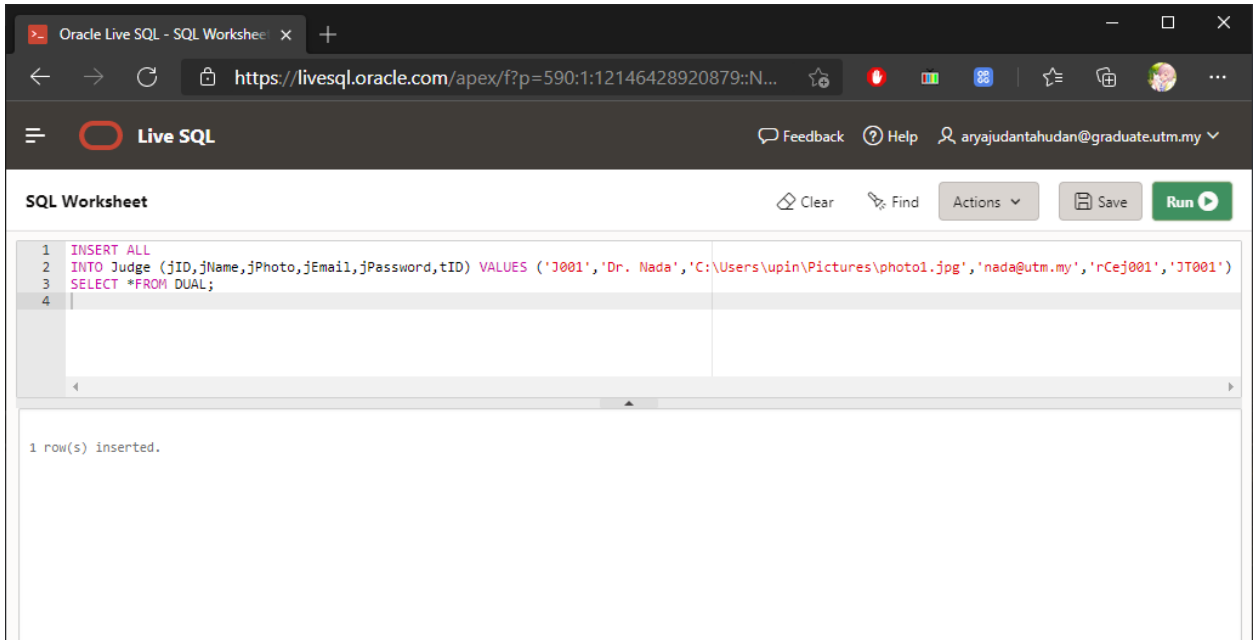
10. [1 Table] Insert data for judge phone
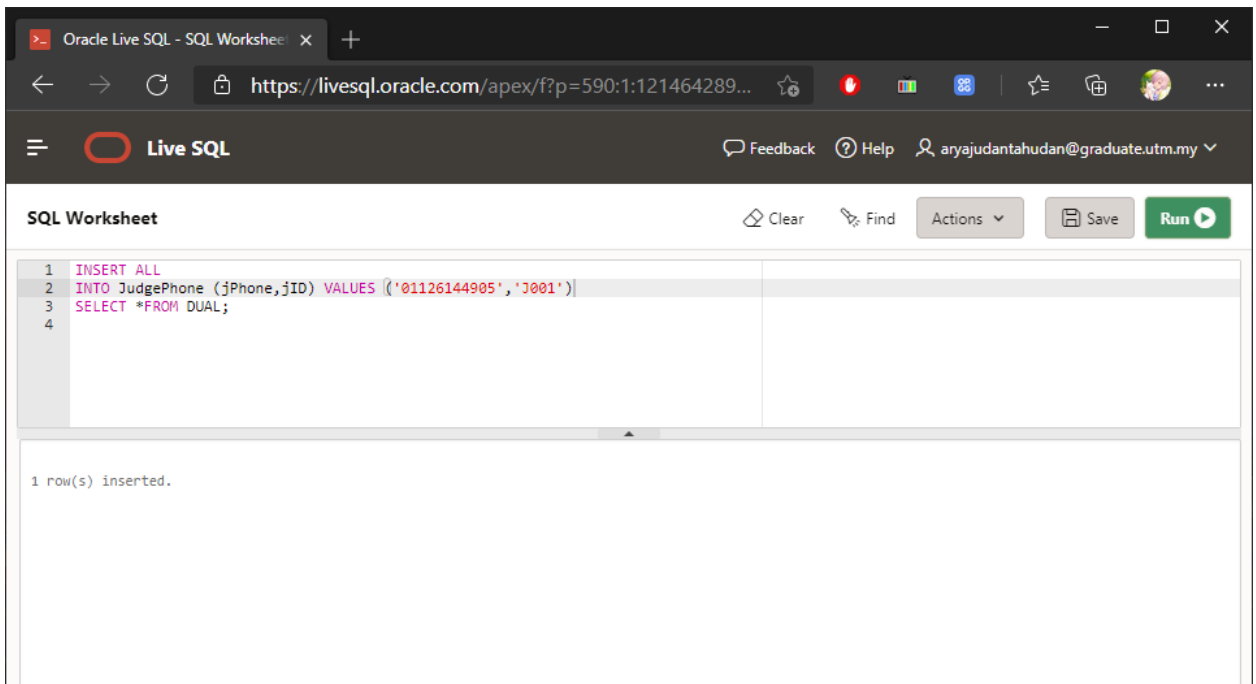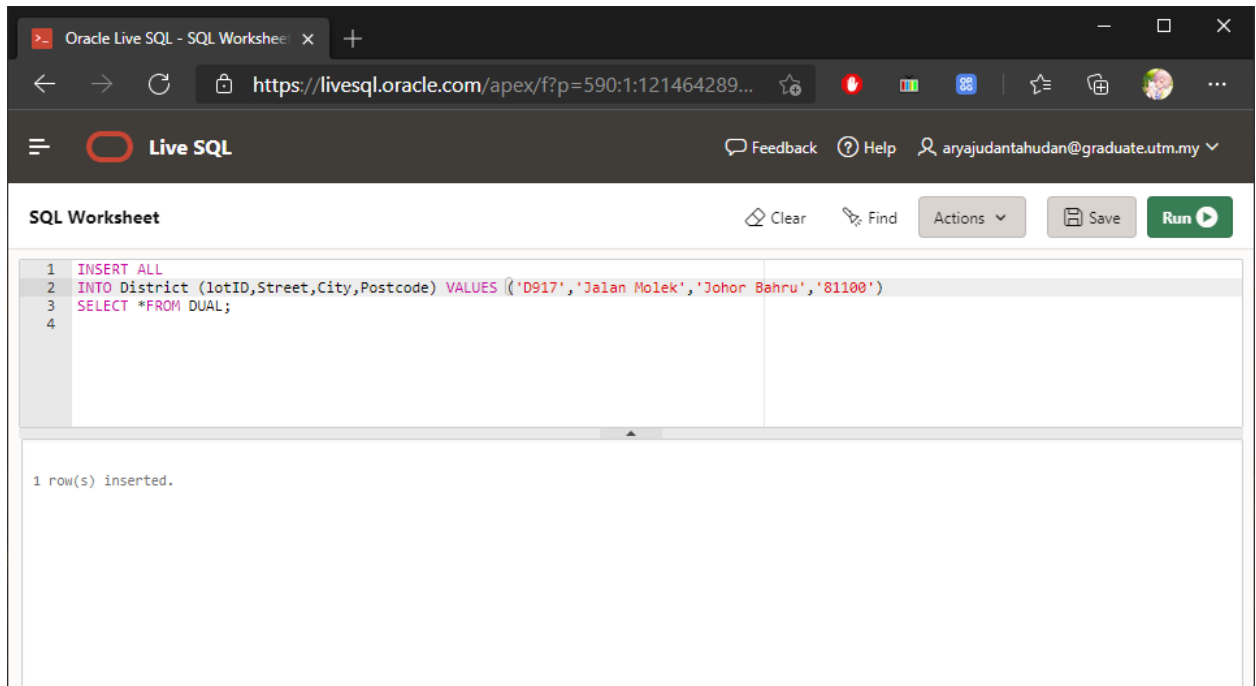
11. [1 Table] Insert data for participant
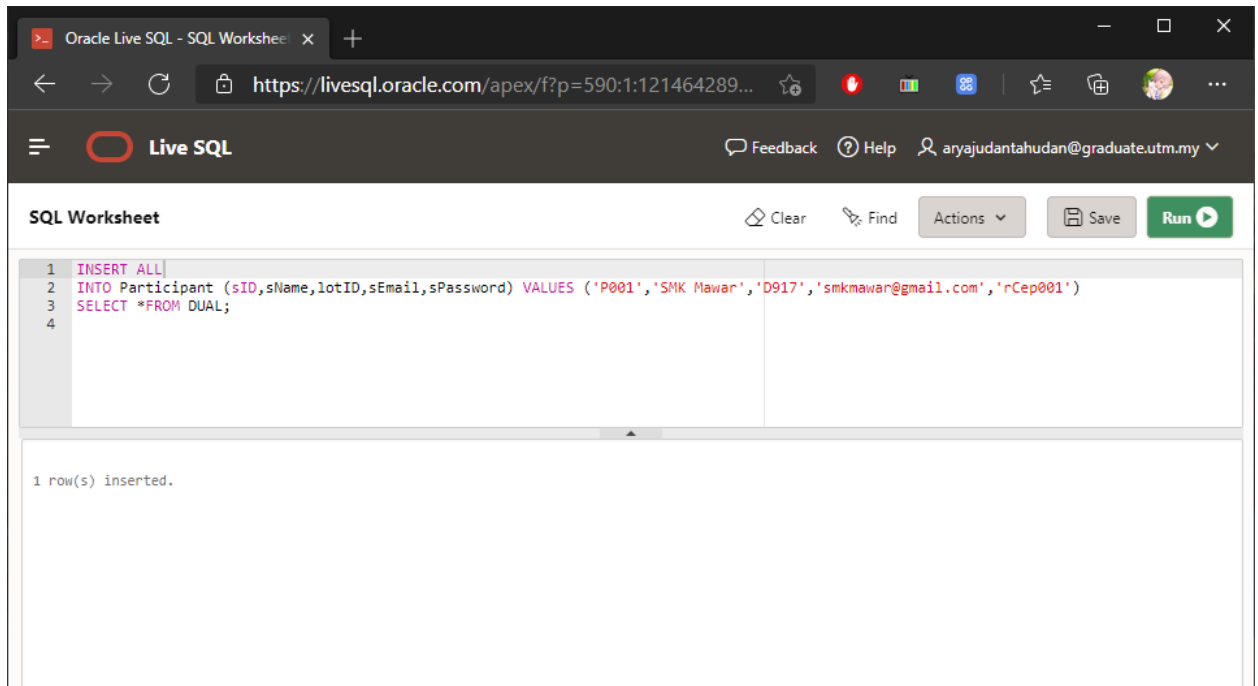
12. [1 Table] Insert data for participant phone

13. [1 Table] Insert data for participant's school district

14. [2 Table] Display list of judges information

15. [2 Table] Display the name of the judge with id 'J001'

16. [2 Table] Display judge's id, name, email, phone number, and photo

17. [3 Table] Display list of participants information

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SQL Worksheet   ◇ Clear   🔍 Find   Actions ⌄   💾 Save   **Run** ▶

```
1  SELECT * FROM Participant;
2  SELECT * FROM ParticipantPhone;
3  SELECT * FROM District;
```

SID	SNAME	LOTID	SEMAIL	SPASSWORD
P001	SMK Mawar	D917	smkmawar@gmail.com	rCep001
P002	SMK Tanjung	F907	smktanjung@yahoo.com	rCep002
P003	MRSM JB	A114	mrsmjb@yahoo.com	rCep003
P004	SMKA JB	E363	smkajb@gmail.com	rCep004
P005	SMK Pulai	Z883	smkpulai@hotmail.com	rCep005
P006	SMK Pulai	D916	smkpulai@gmail.com	rCep001
P007	SMK Kluang	F905	smkkluang@yahoo.com	rCep002
P008	SJK(C) Yong Peng	A112	sjkcyp@yahoo.com	rCep003
P009	SMKA Chaah	E369	smkachaah@gmail.com	rCep004
P010	SMK Pagoh	Z883	smkpulai@hotmail.com	rCep005

Download CSV
10 rows selected.

SPHONE	SID
01134156672	P001
01134166672	P002
01134186672	P003
01134196672	P004
01134106672	P005
01134156671	P006
01134166673	P007
01134186674	P008
01134196675	P009
01134106676	P010

Download CSV
10 rows selected.

70

18. [3 Table] Display the name of the participant with id 'P003'

19. [3 Table] Display participant's id, name, email, street, city, post code, and phone number with id 'P003'

20. [1 Table] Display data for participant materials submissions

MID	UP_DATE	POSTER	VIDEO	FBPAGE	SID	TID	ADVISORID	RANK
M001	25-NOV-20	https://bit.ly/3jpp2	https://bit.ly/3jpp3	https://bit.ly/3jpp4	P001	JT001	T001	-
M002	25-NOV-20	https://bit.ly/3jpp2	https://bit.ly/3jpp3	https://bit.ly/3jpp4	P002	JT001	T002	-
M003	25-NOV-20	https://bit.ly/3jpp2	https://bit.ly/3jpp3	https://bit.ly/3jpp4	P003	JT001	T003	-
M004	25-NOV-20	https://bit.ly/3jpp2	https://bit.ly/3jpp3	https://bit.ly/3jpp4	P004	JT001	T004	-
M005	25-NOV-20	https://bit.ly/3jpp2	https://bit.ly/3jpp3	https://bit.ly/3jpp4	P005	JT001	T005	-
M006	25-NOV-20	https://bit.ly/3jpp2	https://bit.ly/3jpp3	https://bit.ly/3jpp4	P006	JT002	T006	-
M007	25-NOV-20	https://bit.ly/3jpp2	https://bit.ly/3jpp3	https://bit.ly/3jpp4	P007	JT002	T007	-
M008	25-NOV-20	https://bit.ly/3jpp2	https://bit.ly/3jpp3	https://bit.ly/3jpp4	P008	JT002	T008	-
M009	25-NOV-20	https://bit.ly/3jpp2	https://bit.ly/3jpp3	https://bit.ly/3jpp4	P009	JT003	T009	-
M010	25-NOV-20	https://bit.ly/3jpp2	https://bit.ly/3jpp3	https://bit.ly/3jpp4	P010	JT003	T010	-

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