**MARKS** 

CO2: /50

CO3: /50

CO4: /25





## FACULTY OF COMPUTING UNIVERSITI MALAYSIA PAHANG

BCI2023 DATABASE SYSTEMS SEMESTER 1 2022/2023

Group No: G03

Lab Section: 02G

**Lecturer:** MISS NUR FARAHAINA BINTI IDRIS

**Project Title:** ONLINE JOB RECRUITMENT SYSTEM

MATRIC NO	NAME
SD21031	TAN CHEK CHENG
SD21044	DAVID LAU KING LUEN
SD21007	RABIATUL SOFIA BINTI ADNAN
SD21040	KEN FONG KA KIN
SD21051	SHALINI A/P MAGESWARAN

### 1.Project Background

In this day and age, the necessity to execute things is becoming increasingly important. Technology is extremely important in daily life. As a result, several job fields have seen significant modifications, with the recruiting process being one that has seen a major change in its systematic approaches. Because recruiting is a year-round activity involving thousands of candidates, it was determined that the entire process should be automated. Presently, the system requires a manual search of files, folders, and binders. Eventually, the job seeker must locate the company that is offering the required profile. Then, check the post's eligibility or conduct a search based on eligibility by visiting various companies that he is familiar with. In this manual process, it is inevitable that the seeker will not find an offer that exactly matches his or her profile. Because of this lack of information, the individual lost an opportunity, and the company lost a potential applicant for the job posting. As a result, there is currently a clear need for a computerized online system through which both the applicant and the company can interact easily.

This project work is concerned with the design and implementation of online job recruitment system. We considered a automate online job recruitment system, since recruiting employees manually is a time consuming, thus wasting of the company's money or loosely speaking not a wise strategy in terms of economy. This online job recruiting system is a platform that processes all of the organization's employment operations. It is a computerized system that includes many components to help with the procedures of locating, attracting, assessing, interviewing, and hiring a new employee. Through online recruitment, employers can reach a larger number of potential employees compared to the manual system. Finding the ideal applicant nowadays is different than it was in the past. Whether you're just starting out in recruitment or have years of experience, you'll know that one of the most effective tools you can use is the internet. Nowadays, HR departments are becoming digitalized, particularly for recruiting, which corresponds to how people search for employment. By using online job recruitment system plays a vital role in simplifying the recruitment process.

This online job recruitment system ERD is basically consist of 17 entities made of company, job\_position,job\_category, job, job\_platform, application\_detail, applicant\_document, resume, applicant, applicant\_credential, selection\_process, branch, applicant\_evaluation, interview, application\_test, interview\_decision and test result. All the entities are working together to perform data storing that integrated with each other.EERD of system consist of 23 entities with addition of two main subtype from job\_department and

test\_category. SQL is the main tool applied in this system, we apply various technique with the aid of sql software such as creating table, inserting value, commanding query and etc.

### **Objectives:**

- Capture data into a secure database which allow applicant data to be easily accessed by employee and admin anytime
- Determines the potentials of each employee and recommend to company whose performance could meet the organizational goals.
- Offer immediate cost savings on recruiting as well as significant long-term savings over a longer period of time.
- develop a creative, cost-effective, and efficient recruitment system

### Scope:

The online job recruitment system is built to provide a platform for a company to recruit new members into their company. At the same time, people can easily access to a website and apply for a job especially during this covid-19 time where most of the people are losing their job.

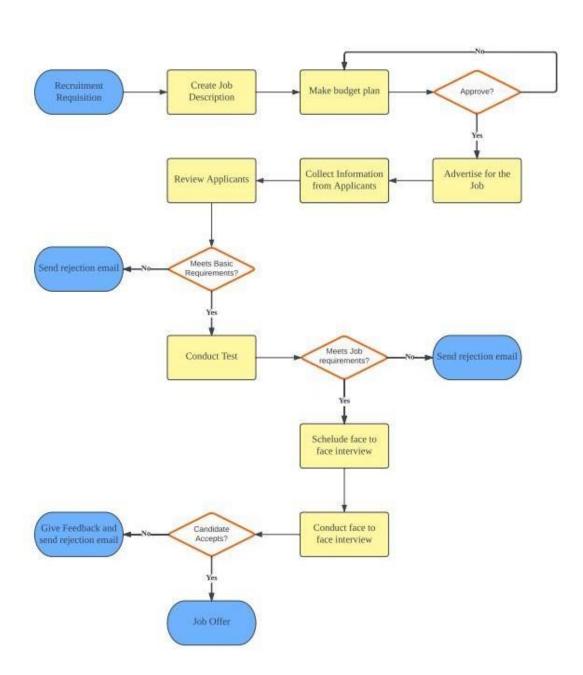
### The user's scope:

- 1. Job
  - Display all the job offers by the company
  - Display the vacancies of the job
  - Display the job platform
- 2. Application\_Detail
  - Input the date application
  - Input the education level
  - Input the experience
  - Input the submission\_frequency
- 3. Selection\_Process
  - Display the appointment date

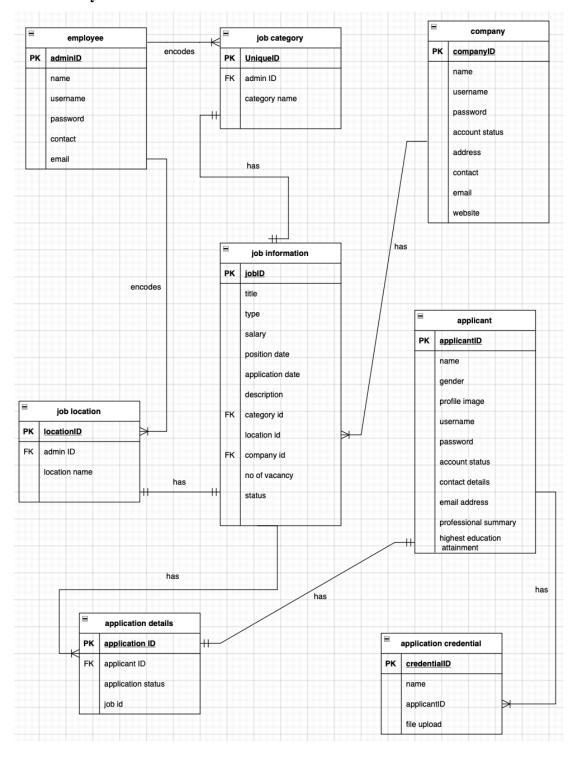
- Display the candidate category
- Display the job recruiter
- 4. Application\_Test
  - Display start time
  - Display end time
  - Display test category
  - Display score
  - Display application id
- 5. Interview Decision
  - Display hired\_decision
  - Display pass\_status
  - Display selection id
  - Display result id

2. Investigate the manual process that occurred for your title/case study. Analyze TWO (2) database systems that significantly relevant to your title. You don't have to compare your prospect @ propose database title (which still not exist yet). These analyses should include the features to support their ERD/EERD. As such the processes or entities, attributes, primary keys and other features. If you put the diagrams from reference, please cited in text. Otherwise, you can draw the diagrams according to your group discussion finding. Put the references with the correct format, see item 9. Show the comparison of these features in Table 2.

#### **Manual Process**



## **Database System 1**

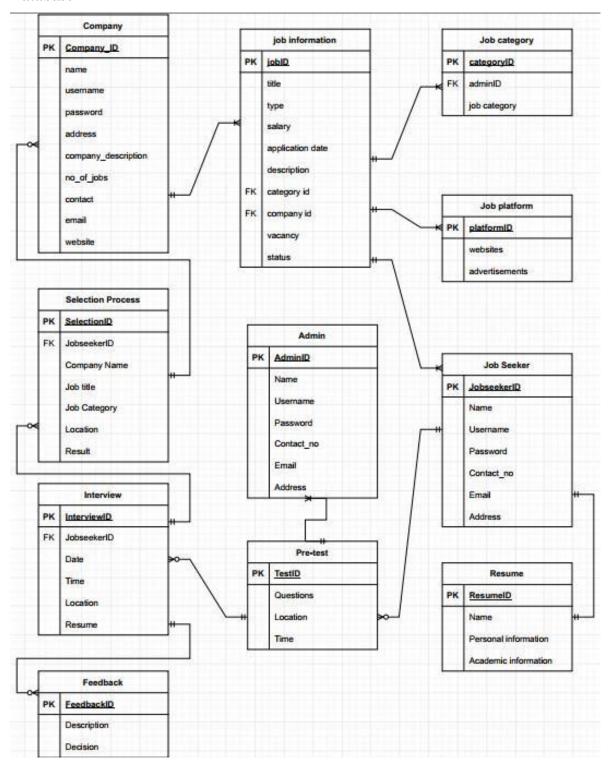


	Database System 1
Process/Entities	<ol> <li>employee</li> <li>applicant</li> <li>job category</li> <li>company</li> <li>applicant credential</li> <li>application details</li> <li>job location</li> <li>job information</li> </ol>
Attributes	1.employee
	<ul> <li>admin ID (PK)</li> <li>name</li> <li>username</li> <li>password</li> <li>contact</li> <li>email</li> </ul>
	2.applicant
	<ul> <li>applicant ID (PK)</li> <li>Name</li> <li>Gender</li> <li>Profile image</li> <li>Username</li> <li>Password</li> <li>Account status</li> <li>Contact details</li> <li>Email address</li> <li>Professional summary</li> <li>Highest education attainment</li> </ul>
	3. company
	<ul> <li>Company ID (PK)</li> <li>Name</li> <li>Username</li> <li>Password</li> <li>Account status</li> <li>Address</li> <li>Contact</li> </ul>

• Email
• Website
4.job location
,
Location ID (PK)
Admin ID (FK)
Location name
5. application details
• Application ID (DV)
<ul><li>Application ID (PK)</li><li>Applicant ID (FK)</li></ul>
Application status
• Job id
305 14
6.job information
Job ID (PK)
• Title
• Type
• Salary
Position date
Application date
Description     Categoryid (EK)
<ul><li>Category id (FK)</li><li>Location id</li></ul>
Company id (FK)
No of vacancy
• Status
Status
7.applicationcredential
Credential ID (PK)
• Name
Applicant ID
File upload
8.job category
 o.job category

Primary keys	<ul> <li>Category ID (PK)</li> <li>Admin ID (FK)</li> <li>Category name</li> </ul> Primary keys
	<ul> <li>1 Admin id</li> <li>2 Location id</li> <li>3 Job id</li> <li>4 Company id</li> <li>5 Applicant id</li> <li>6 Credential id</li> </ul>
Other features	1. Admin id 2. Category id 3. Company id 4. Applicant id
Diagram	ERD
Reference	Inettutor.com. (2020, July 10). Job portal system er diagram. Retrieved December 14, 2022, from <a href="https://www.inettutor.com/diagrams/job-portal-system-er-diagram/">https://www.inettutor.com/diagrams/job-portal-system-er-diagram/</a>

### Database 2



	Database System 2
Process/Entities	<ol> <li>Company</li> <li>Job Information</li> <li>Job Category</li> <li>Job Platform</li> <li>Job Seeker</li> <li>Resume</li> <li>Admin</li> <li>Pre-test</li> <li>Interview</li> <li>Feedback</li> <li>Selection Process</li> </ol>
Attributes	1.Company
	<ul> <li>Company_ID</li> <li>NamE</li> <li>Username</li> <li>Password</li> <li>Contact_no</li> <li>Email</li> <li>Address</li> </ul> 2. Job Information <ul> <li>JobID</li> <li>Tittle</li> <li>Type</li> <li>Salary</li> <li>Application date</li> <li>Description</li> <li>Category id</li> <li>Company id</li> <li>Vacancy</li> <li>status</li> </ul> 3. Job Category <ul> <li>adminID</li> <li>job category</li> </ul> 4. Job platform

5. Job Seeker	
	<ul> <li>JobseekerID</li> </ul>
	• Name
	Username
	<ul> <li>Password</li> </ul>
	Contact_no
	• Email
	• Address
6. Resume	
	• ResumeID
	• Name
<ul> <li>Personal Ir</li> </ul>	nformation
<ul> <li>Academic I</li> </ul>	nformation
7. Admin	
	• AdminID
	• Name
	• Username
	<ul> <li>Password</li> </ul>
	Contact_no
	• Email
	• Address
8. Pre-test	
	<ul> <li>Questions</li> </ul>
	• Location
	• Time
9. Interview	
	• jobseekerID
	• Date
	• Time
	• Location
	• Resume
10. Feedback	
	• Description
	• Decision

	11. Selection Process
	SelectionID
	JobseekerID
	Company name
	Job title
	Job category
	• Location
	Result
Primary keys	Primary keys
	1. Company_ID
	2. JobID
	3. CategoryID
	4. PlatformID
	5. JobseekerID
	6. ResumeID
	7. AdminID
	8. TestID
	9. InterviewID
	10. FeedbackID
	11. SelectionID
Other features	Foreign Keys
	1. Category id
	2. Company id
	3. AdminID
	4. JobseekerID
	5. JobseekerID
Diagram	ERD
Reference	Popular diagram templates: Many templates covering all
	diagram types. Retrieved December 18, 2022, from
	https://creately.com/diagram-
	community/popular?error=diagramNotFound&id=honyutm51

## 3. Business Rules

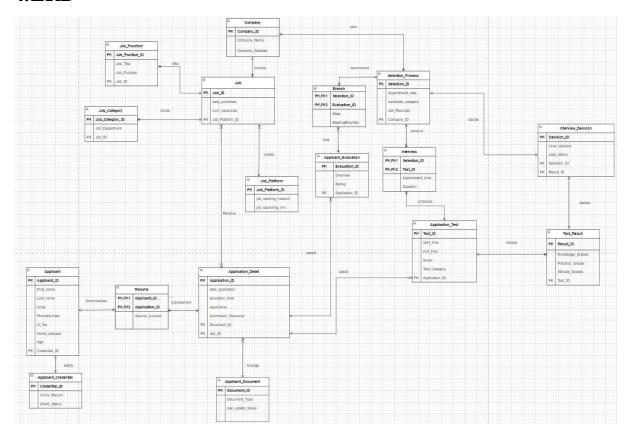
### **Business rules for ERD**

- A company provides one or more jobs. A job is provided by a company.
- A job offers one or more job positions. A job position is offered by a job.
- A job is divided into one or more job categories. One job category is divided by a job.
- A job can create a job platform for advertisement. A job platform may be created or by more jobs.
- The company may receive application detail. The application detail may be received by the company.
- An applicant document may help to arrange the application details. An application detail is arranged by one applicant document.
- An applicant is required to provide at least one detail for application in the resume. A job may receive application detail from applicant in the form of resume.
- An applicant needs to testify credential. Credential of an applicant is required to be testified.
- An application detail may help to assist application evaluation. An application evaluation is assisted by an application detail.
- In selection process, one or more interview is conducted. An interview is conducted by a selection process.
- An application detail may help in selection process through evaluation in the company's branch. The selection process in one or many company's branches can be supported by an application evaluation from an application detail.
- An application detail may assist application test. An application test can be support by an application detailfrom applicant.
- An interview schedules an application test. An application test can be scheduled by one or more interview.
- Application test release one or more test result to the applicant. A test result is released by an application test.
- A test result decides the interview decision. An Interview decision is decided by the test result.
- A selection process is decided by an interview decision. An interview decision decides the selection process.
- A company plans one or more selection processes based on the interview decision. A selection process is planned by a company.

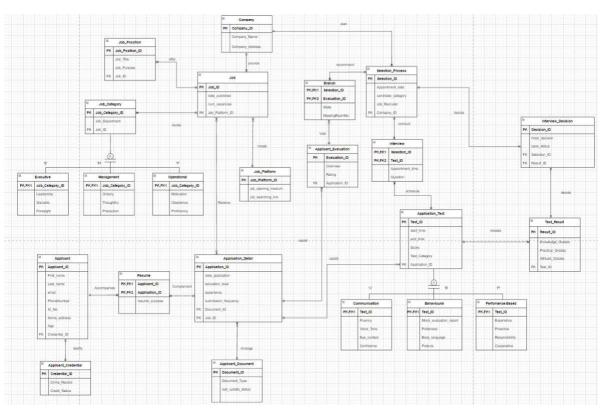
### **Business rules for EERD**

- A company provides one or more jobs. A job is provided by a company.
- A job offers one or more job positions. A job position is offered by a job.
- A job is divided into one or more job categories. One job category is divided by a job.
- One of the job categories must be come from executive category, management category and operational category.
- A job can create a job platform for advertisement. A job platform may be created or by more jobs.
- The company may receive application detail. The application detail may be received by the company.
- An applicant document may help to arrange the application details. An application detail is arranged by one applicant document.
- An applicant is required to provide at least one detail for application in the resume.
   A job may receive application detailfrom applicant in the form of resume.
- An applicant needs to testify credential. Credential of an applicant is required to be testified.
- An application detail may help to assist application evaluation. An application evaluation is assisted by an application detail.
- In selection process, one or more interview is conducted. An interview is conducted by a selection process.
- An application detail may help in selection process through evaluation in the company's branch. The selection process in one or many company's branches can be supported by an application evaluation from an application detail.
- An application detail may assist application test. An application test can be support by an application detailfrom applicant.
- An interview schedules an application test. An application test can be scheduled by one or more interview.
- An application test might be consisted of one or more tests from communication, behavioural and performance-based test.
- Application test release one or more test result to the applicant. A test result is released by an application test.
- A test result decides the interview decision. An Interview decision is decided by the test result.
- A selection process is decided by an interview decision. An interview decision decides the selection process.
- A company plans one or more selection processes based on the interview decision. A selection process is planned by a company.

## 4.ERD



## **EERD**



```
CREATE DATABASE JOB;
USE JOB;
CREATE TABLE COMPANY(
COMPANY_ID VARCHAR(10) NOT NULL PRIMARYKEY,
COMPANY_NAME VARCHAR(30),
COMPANY_ADDRESS VARCHAR(100)
);
CREATE TABLE JOB
(
JOB_ID VARCHAR(10) NOT NULL PRIMARY KEY, DATE_PUBLISHED
DATE,
NUM_VACANCIES INT, JOB_PLATFORM_ID
VARCHAR(10)
);
CREATE TABLE JOB_POSITION
JOB_POSITION_ID VARCHAR(10) NOT NULLPRIMARY
KEY,
JOB_TITLE VARCHAR(100),
JOB_PURPOSE VARCHAR(100),JOB_ID
VARCHAR(10),
CONSTRAINT JOB_POSITION_FK FOREIGNKEY(JOB_ID)
REFERENCES JOB(JOB_ID)
);
```

**5.** 

```
CREATE TABLE JOB_CATEGORY
(
JOB_CATEGORY_ID VARCHAR(10) NOT NULLPRIMARY KEY,
JOB_DEPARTMENT VARCHAR(100),JOB_ID
VARCHAR(10),
CONSTRAINT JOB_CATEGORY_FK FOREIGNKEY(JOB_ID)
REFERENCES JOB(JOB_ID)
);
CREATE TABLE JOB_PLATFORM
JOB_PLATFORM_ID VARCHAR(10) NOT NULLPRIMARY KEY,
JOB OPENING MEDIUM VARCHAR(100),
JOB_SEARCHING_LINK VARCHAR(100)
);
CREATE TABLE APPLICANT DOCUMENT
(
DOCUMENT ID VARCHAR(10) NOT NULL PRIMARY KEY,
DOCUMENT_TYPE VARCHAR(10),
LAST_UPDATE_STATUS DATE
);
CREATE TABLE APPLICATION DETAIL
APPLICATION ID VARCHAR(10) NOT NULL PRIMARY
KEY,
DATE_APPLICATION DATE,
EDUCATION_LEVEL VARCHAR(10),
EXPERIENCE VARCHAR(10),
SUBMISSION_FREQUENCY INT,
DOCUMENT_ID VARCHAR(10), JOB_ID
VARCHAR(10),
```

```
CONSTRAINT APPLICATION_DETAIL_FK1 FOREIGNKEY(JOB_ID)
REFERENCES JOB(JOB_ID), CONSTRAINT
APPLICATION DETAIL FK2 FOREIGNKEY(DOCUMENT ID)
REFERENCES APPLICANT_DOCUMENT(DOCUMENT_ID)
); CREATE TABLE APPLICANT CREDENTIAL(
CREDENTIAL_ID VARCHAR(10) NOT NULL PRIMARY
KEY, CRIME_RECORD INT,
CREDIT_STATUS VARCHAR(20)
);
CREATE TABLE APPLICANT
(
APPLICANT_ID VARCHAR(10) NOT NULL PRIMARY KEY,
FIRST_NAME VARCHAR(20), LAST_NAME
VARCHAR(20), EMAIL VARCHAR(50),
PHONENUMBER VARCHAR(20), IC_NO
VARCHAR(30), HOME_ADDRESS
VARCHAR(100), AGE INT,
CREDENTIAL_ID VARCHAR(10), CONSTRAINT
APPLICANT_FK FOREIGN KEY(CREDENTIAL_ID)
REFERENCES APPLICANT CREDENTIAL (CREDENTIAL ID)
);
```

```
CREATE TABLE RESUME
APPLICATION_ID VARCHAR(10) NOT NULL,
FOREIGN KEY(APPLICATION_ID) REFERENCES
APPLICATION DETAIL(APPLICATION ID), APPLICANT ID
VARCHAR(10) NOT NULL, FOREIGN KEY(APPLICANT ID)
REFERENCES APPLICANT(APPLICANT_ID),
PRIMARY KEY(APPLICATION ID, APPLICANT ID), RESUME PURPOSE
VARCHAR(100)
);
CREATE TABLE SELECTION_PROCESS
SELECTION_ID VARCHAR(10) NOT NULL PRIMARY KEY,
APPOINTMENT DATE DATE,
CANDIDATE_CATEGORY VARCHAR(30),
JOB RECRUITER VARCHAR(10), COMPANY ID
VARCHAR(10),
CONSTRAINT SELECTION PROCESS FK FOREIGNKEY(COMPANY ID)
REFERENCES COMPANY(COMPANY_ID)
);
CREATE TABLE APPLICANT EVALUATION
EVALUATION_ID VARCHAR(10) NOT NULL PRIMARY KEY,
OVERVIEW VARCHAR(100), RATING
VARCHAR(5), APPLICATION_ID
VARCHAR(10),
CONSTRAINT APPLICANT EVALUATION FK FOREIGN
KEY(APPLICATION_ID) REFERENCES
APPLICATION DETAIL(APPLICATION ID)
);
```

```
CREATE TABLE BRANCH(
SELECTION_ID VARCHAR(10) NOT NULL, FOREIGN
KEY(SELECTION ID) REFERENCES
SELECTION_PROCESS(SELECTION_ID), EVALUATION_ID
VARCHAR(10) NOT NULL, FOREIGN KEY(EVALUATION ID)
REFERENCES APPLICANT_EVALUATION(EVALUATION_ID),
PRIMARY KEY(SELECTION_ID, EVALUATION_ID), STATE
VARCHAR(20),
MEETING_ROOM_NO VARCHAR(10)
);
CREATE TABLE APPLICATION_TEST
(
TEST_ID VARCHAR(10) NOT NULL PRIMARY KEY,
START_TIME TIME,
END_TIME TIME,
TEST CATEGORY VARCHAR(20), SCORE INT,
APPLICATION ID VARCHAR(10),
CONSTRAINT APPLICATION TEST FK FOREIGN
KEY(APPLICATION_ID) REFERENCES
APPLICATION_DETAIL(APPLICATION_ID)
);
CREATE TABLE INTERVIEW
(
SELECTION ID VARCHAR(10) NOT NULL, FOREIGN
KEY(SELECTION ID) REFERENCES
SELECTION_PROCESS(SELECTION_ID), TEST_ID
VARCHAR(10) NOT NULL,
FOREIGN KEY(TEST_ID) REFERENCES
APPLICATION_TEST(TEST_ID), PRIMARY
KEY(SELECTION_ID,TEST_ID), APPOINTMENT_TIME
TIME,
QUESTION VARCHAR(100)
```

);

```
CREATE TABLE TEST_RESULT
RESULT_ID VARCHAR(10) NOT NULL PRIMARY KEY,
KNOWLEDGE_GRADES VARCHAR(10), PRACTICAL_GRADES
VARCHAR(10), ATTITUDE_GRADES VARCHAR(10), OVERALL_GRADES
VARCHAR(10),
TEST_ID VARCHAR(10),
CONSTRAINT TEST_RESULT_FK FOREIGNKEY(TEST_ID)
REFERENCES APPLICATION_TEST(TEST_ID)
);
CREATE TABLE INTERVIEW_DECISION
(
DECISION_ID VARCHAR(10) NOT NULL PRIMARYKEY,
HIRED_DECISION VARCHAR(10),
PASS_STATUS VARCHAR(10),
SELECTION_ID VARCHAR(10), RESULT_ID
VARCHAR(10),
CONSTRAINT INTERVIEW DECISION FK1 FOREIGN
KEY(SELECTION_ID) REFERENCES
SELECTION_PROCESS(SELECTION_ID),
CONSTRAINT INTERVIEW DECISION FK2 FOREIGNKEY(RESULT ID)
REFERENCES TEST RESULT(RESULT ID)
);
```

### **INSERT INTO COMPANY**

### **VALUES**

('C001','Samsung','37A Jalan Bakawali 52 Taman Jaya,81100 Johor Bahru Johor'),

('C002','Apple','No. 43 Jln Lombong Emas 2 Taman Industri Ringan Mps 70200 Negeri Sembilan'), ('C003','Xiaomi','1 Blok 488D One Stop Centre Jln Burma10350 Penang'),

('C004','Banana','G Wisma Mirama Jln Wisma Putra 50460Wilayah Persekutuan'),

('C005','Pineapple','27 Jln Permatang 2 Taman Desa Jaya81100 Johor'), ('C006','Tesla','7 Batu 2/3 Jalan Taman PerindustrianTampoi Jaya Johor Bahru'),

('C007','Nike','No. 55 Jln Telawi 3 Bangsar Baru KualaLumpur'), ('C008','Puma','22 Jln Tp 5 Taman Perindustrian Sime UepPetaling Jaya'),

('C009','Adidas','C 3A 23 4Th Floor Blok C Megan PhoenixJalan 2/142A Km 10 Jalan Cheras Mal Kuala Lumpur'), ('C010','Huawei','Bangunan Kerjasama Jln Dhoby Johor Bahru');

### **INSERT INTO JOB**

#### **VALUES**

('J001','2023-01-01',5,'PL001'),

('J002','2023-01-15',7,'PL002'),

('J003','2023-01-20',3,'PL003'),

('J004','2023-01-25',5,'PL004'),

('J005','2023-02-01',4,'PL005'),

('J006','2023-01-22',6,'PL006'),

('J007','2023-01-08',6,'PL007'),

('J008','2023-01-07',3,'PL008'),

('J009','2023-01-17',1,'PL009'),

('J010','2023-01-23',2,'PL010');

## INSERT INTO JOB\_CATEGORY **VALUES** ('JC001','Finance','J001'), ('JC002','Marketing','J002'), ('JC003','Customer service','J003'), ('JC004','Business','J004'), ('JC005', 'Sales', 'J005'), ('JC006','Human resource','J006'), ('JC007','Finance','J007'), ('JC008','Marketing','J008'), ('JC009','Business','J009'), ('JC010','Finance','J010'); INSERT INTO JOB\_PLATFORM **VALUES** ('PL001','Facebook','https://www.jobstreet.com.my/en/job- search/departmentjobs/'), ('PL002', 'Youtube', 'https://blog.hubspot.com/marketing/ma rketing-jobdescriptions'), ('PL003', 'Linkedin', 'https://blog.hubspot.com/service/what-arecustomer-service-jobs'), ('PL004', 'Facebook', 'https://www.indeed.com/careeradvice/career-development/business-departments'), ('PL005','Instagram','https://www.pipedrive.com/en/blog/types-of-sales-jobs'), ('PL006', 'Youtube', 'https://www.theladders.com/'), ('PL007','Linkedin','https://angel.co/'), ('PL008','Instagram','https://www.internships.com/'),

('PL009','Linkedin','https://www.linkedin.com/feed/'),

co-m');

('PL010', 'Facebook', 'https://www.jobstreet.com.my/en/companies/610504-aeon-

### INSERT INTO APPLICANT DOCUMENT

### **VALUES**

('D001','SoftCopy','2023-03-08'),

('D002','HardCopy','2023-02-20'),

('D003','HardCopy','2023-03-08'),

('D004','SoftCopy','2023-03-04'),

('D005','SoftCopy','2023-02-08'),

('D006', 'SoftCopy', '2023-02-20'),

('D007','SoftCopy','2023-01-16'),

('D008','SoftCopy','2023-02-08'),

('D009','SoftCopy','2023-02-25'),

('D010','SoftCopy','2023-02-28');

### **INSERT INTO APPLICATION DETAIL**

### **VALUES**

('A001','2023-03-01','Degree','5 Years',4,'D001','J001'),

('A002','2023-02-13','O-Level','4 Years',5,'D002','J002'),

('A003','2023-03-01','A-Level','3 Years',3,'D003','J003'),

('A004','2023-02-24','Degree','4 Years',1,'D004','J004'),

('A005','2023-02-01','Degree','13 Years',2,'D005','J005'),

('A006','2023-02-12','Degree','1 Years',6,'D006','J006'),

('A007','2023-01-09','Degree','5 Years',5,'D007','J007'),

('A008','2023-02-01','Master','10 Years',3,'D008','J008'),

('A009','2023-02-17','Degree','8 Years',5,'D009','J009'),

('A010','2023-02-20','Phd','10 Years',3,'D010','J010');

### INSERT INTO APPLICANT\_CREDENTIAL

**VALUES** 

```
('CR001',0,'Excellent'),
('CR002',0,'Good'),
('CR003',2,'Poor'),
('CR004',0,'Good'),
('CR005',1,'Dissatisfaction'),
('CR006',0,'Good'),
('CR007',0,'Excellent'),
('CR008',0,'Excellent'),
('CR009',0,'Excellent'),
('CR010',0,'Excellent');
INSERT INTO APPLICANT
VALUES
('A001','Eric','Louis','ericlouis90@gmail.com','012-9339692','941112-
10-5847', 'No.20 Mankato Mississippi96522 Selangor', 29, 'CR001'),
('A002','Adam','Zafar','adamzafar32@gmail.com','010-5990205','970123-13-
6083', 'No.17 Frederick Nebraska 20620Sarawak', 26, 'CR002'),
('A003','Carl','Fong','carlfong01@gmail.com','015-8448683','010308-02-
9421', 'No1. Street Roseville 11523Kedah', 22, 'CR003'),
('A004', 'Steve', 'Job', 'stevejob60@gmail.com', '016-7667173', '901220-
09-7147', 'No.69 San Antonio 47096Perlis', 33, 'CR004'),
('A005','Thomas','Musk','thomasmusk1884@gmail.com','013-9889696','840920-
01-1421', 'No.67 Road Chelsea 67708 Johor', 38, 'CR005'),
('A006','Anakin','Yee','anakinyeeee@gmail.com','010- 5984453','980715-14-
8573','9, Jalan Kaskas, Taman Cheras,52082 Cheras, Wilayah Persekutuan
Kuala Lumpur, Malaysia',25,'CR006'),
('A007', 'Janice', 'Wong', 'Janiceee 77@gmail.com', '019-3774189', '920422-07-
```

5104','84, Lebuh Pasar, George Town, 10933 George Town, Pulau

```
Pinang',31,'CR007'),
('A008', 'Benedict', 'Cumberbatch', 'wizard123@gmail.com', '016-
8513312','850228-08-9655','40, Jalan Gunung Rapat,
Taman Rapat Setia, 304 Ipoh, Perak', 37, 'CR008'),
('A009','Henry','Lau','henrylau1980@gmail.com','018- 3364758','891225-01-
2167','44, Jln Medini Sentral 5, 79194
Nusajaya, Johor',34,'CR009'),
('A010','Allan','Skywalker','allanskywalker99@gmail.com',' 011-
7741258', '880103-10-0473', '54, Jalan Subang, IndustriesPark, 4761 Subang
Java, Selangor', 35, 'CR010');
INSERT INTO RESUME
VALUES
('AP001','A001','Equipped with finance knowledge'),
('AP002', 'A002', 'Ability in communication'), ('AP003', 'A003', 'Ability
in solving problem'), ('AP004', 'A004', 'Ability in analyzing business
data'),('AP005','A005','Ability in communication'),
('AP006','A006','Ability in leadership and time management'),
('AP007','A007','Equipped with finance knowledge'),('AP008','A008','Ability in
communication'), ('AP009','A009','Ability in analyzing business data'),
('AP010','A010','Equipped with finance knowledge');
INSERT INTO SELECTION PROCESS
VALUES
('SE001','2023-03-27','Senior Level','Amy','C001'),
('SE002','2023-03-04','Junior Level','Sean','C002'),
('SE003','2023-03-26','Junior Level','Allan','C003'),
('SE004','2023-03-16','Senior Level','John','C004'),
('SE005','2023-02-25','Higher Level','Anderson','C005'),
('SE006','2023-03-04','Fresh Graduate
Level', 'Emily', 'C006'),
('SE007','2023-01-30','Senior Level','Stan','C007'),
```

('SE008','2023-02-24','Higher Level','Robert','C008'),

```
('SE009','2023-03-11','Senior Level','Nicole','C009'),
('SE010','2023-03-15','Higher Level','Jacky','C010');
INSERT INTO APPLICANT EVALUATION
VALUES
('EV001','Good learning ability','A','A001'),
('EV002','Job hopper','C','A002'),
('EV003','Weak leadership','C','A003'),
('EV004','Poor communication skill','D','A004'),
('EV005', 'Strong leadership', 'S', 'A005'),
('EV006','Lack of experience','C','A006'),
('EV007','Creative thinking','A','A007'),
('EV008','Well experienced with professional knowledgebased','A','A008'),
('EV009','Good communication skill','B','A009'),('EV010','Good problem solving
skill','S','A010');
INSERT INTO BRANCH VALUES
('SE001','EV001','Penang','PN1'),
('SE002','EV002','Sarawak','SRW3'),
('SE003','EV003','Perak','PK4'),
('SE004','EV004','Selangor','SE3'),
('SE005','EV005','Perlis','PS4'),
('SE006','EV006','Melaka','MK5'),
('SE007','EV007','Pahang','PH2'),
('SE008', 'EV008', 'Johor', 'JH1'),
```

```
('SE009','EV009','Sabah','SB2'),
('SE010','EV010','Selangor','SE2');
```

### INSERT INTO APPLICATION\_TEST

### **VALUES**

('TT001','12:00','14:00','Perfomance-Based',95,'A001'),

('TT002','12:00','14:00','Perfomance-Based',70,'A002'),

('TT003','14:00','16:00','Communication',60,'A003'),

('TT004','12:00','14:00','Behavioural',68,'A004'),

('TT005','14:00','16:00','Communication',92,'A005'),

('TT006','12:00','14:00','Perfomance-Based',74,'A006'),

('TT007','14:00','16:00','Perfomance-Based',93,'A007'),

('TT008','14:00','16:00','Communication',90,'A008'),

('TT009','12:00','14:00','Bahavioural',88,'A009'),

('TT010','14:00','16:00','Communication',97,'A010');

### **INSERT INTO INTERVIEW**

### **VALUES**

('SE001','TT001','10.00','SETA1'),

('SE002','TT002','10.00','SETA3'),

('SE003','TT003','12.00','SETB2'),

('SE004','TT004','10.00','SETC2'),

('SE005','TT005','12.00','SETB1'),

('SE006','TT006','10.00','SETA3'),

('SE007','TT007','12.00','SETA2'),

```
('SE008','TT008','12.00','SETB3'),
('SE009','TT009','10.00','SETC2'),
('SE010','TT010','12.00','SETB1');
```

# INSERT INTO TEST\_RESULT VALUES

('R001','A','A','A','A','TT001'),

('R002','B','C','B','B','TT002'),

('R003','C','B','C','C','TT003'),

('R004','C','C','A','B','TT004'),

('R005','A','A','B','A','TT005'),

('R006','B','C','A','B','TT006'),

('R007','A','B','A','A','TT007'),

('R008','B','A','A','A','TT008'),

('R009','A','C','A','A','TT009'),

('R010','A','A','A','A','TT010');

## INSERT INTO INTERVIEW\_DECISION

### **VALUES**

('DD001','Yes','Pass','SE001','R001'),

('DD002','No','Fail','SE002','R002'),

('DD003','No','Fail','SE003','R003'),

('DD004','No','Fail','SE004','R004'),

('DD005','Yes','Pass','SE005','R005'),

('DD006','No','Fail','SE006','R006'),

```
('DD007','Yes','Pass','SE007','R007'),

('DD008','Yes','Pass','SE008','R008'),

('DD009','Yes','Pass','SE009','R009'),

('DD010','Yes','Pass','SE010','R010');
```

COMPANY_ID   COMPANY_NAME   COMPANY_ADDRESS	mysql> SELECT	* FROM COMPANY	
C002 Apple No. 43 Jln Lombong Emas 2 Taman Industri Ringan Mps 70200 Negeri Sembilan C003 Xiaomi 1 Blok 488D One Stop Centre Jln Burma 10350 Penang C004 Banana G Wisma Mirama Jln Wisma Putra 50460 Wilayah Persekutuan C005 Pineapple 27 Jln Permatang 2 Taman Desa Jaya 81100 Johor C006 Tesla 7 Batu 2/3 Jalan Taman Perindustrian Tampoi Jaya Johor Bahru C007 Nike No. 55 Jln Telawi 3 Bangsar Baru Kuala Lumpur C008 Puma 2 2 Jln Tp 5 Taman Perindustrian Sime Uep Petaling Jaya C009 Adidas C 3A 23 4Th Floor Blok C Megan Phoenix Jalan 2/142A Km 10 Jalan Cheras Mal Kuala Lumpur	COMPANY_ID	COMPANY_NAME	COMPANY_ADDRESS
	C002   C003   C004   C005   C006   C007   C008   C009	Apple     Xiaomi     Banana     Pineapple     Tesla     Nike     Puma     Adidas	No. 43 Jln Lombong Emas 2 Taman Industri Ringan Mps 70200 Negeri Sembilan  1 Blok 488D One Stop Centre Jln Burma 10350 Penang G Wisma Mirama Jln Wisma Putra 50460 Wilayah Persekutuan 27 Jln Permatang 2 Taman Desa Jaya 81100 Johor 7 Batu 2/3 Jalan Taman Perindustrian Tampoi Jaya Johor Bahru No. 55 Jln Telawi 3 Bangsar Baru Kuala Lumpur 2 2 Jln Tp 5 Taman Perindustrian Sime Uep Petaling Jaya C 3A 23 4Th Floor Blok C Megan Phoenix Jalan 2/142A Km 10 Jalan Cheras Mal Kuala Lumpur

mysql> SEL	ECT * FROM JOB;		
JOB_ID	DATE_PUBLISHED	NUM_VACANCIES	JOB_PLATFORM_ID
+	2023-01-01 2023-01-15 2023-01-20 2023-01-25 2023-02-01 2023-01-22 2023-01-08 2023-01-07	5 7 3 5 4 6 6 3	PL001   PL002   PL003   PL004   PL005   PL006   PL007   PL008
J009     J010   +	2023-01-17 2023-01-23	1   2	PL009   PL010 

JOB_POSITION_ID	JOB_TITLE	JOB_PURPOSE	JOB_IC
JP001	+   Accountant	Management and reporting of financial data	+   J001
JP002	Social media manager	Identifying trends in customer interactions	J002
JP003	Technical support specialist	Providing technical support	J003
JP004	Business analyst	Defining business problems	J004
JP005	Sales trainee	Observing the sales process by assisting sales representatives	J005
JP006	Human resources manager	Overseeing the administrative functions of an organization	J006
JP007	Chief financial officer	Racking cash flow and financial planning	J007
JP008	Product manager	Identifying customer need and larger business objectives	J008
JP009	Business analyst	Defining business problems	J009
JP010	Finance manager	Budget planning	J010

mysql> SELECT * FRO	OM JOB_CATEGORY;	
JOB_CATEGORY_ID	JOB_DEPARTMENT	JOB_ID
JC001	Finance	J001
JC002	Marketing	J002
JC003	Customer service	J003
JC004	Business	J004
JC005	Sales	J005
JC006	Human resource	J006
JC007	Finance	J007
JC008	Marketing	J008
JC009	Business	J009
JC010	Finance	J010
+		++

		:
JOB_PLATFORM_ID	JOB_OPENING_MEDIUM	JOB_SEARCHING_LINK
PL001	Facebook	https://www.jobstreet.com.my/en/job-search/department-jobs/
PL002	Youtube	https://blog.hubspot.com/marketing/marketing-job-descriptions
PL003	Linkedin	https://blog.hubspot.com/service/what-are-customer-service-jobs
PL004	Facebook	https://www.indeed.com/career-advice/career-development/business-departments
PL005	Instagram	https://www.pipedrive.com/en/blog/types-of-sales-jobs
PL006	Youtube	https://www.theladders.com/
PL007	Linkedin	https://angel.co/
PL008	Instagram	https://www.internships.com/
PL009	Linkedin	https://www.linkedin.com/feed/
PL010	Facebook	https://www.jobstreet.com.my/en/companies/610504-aeon-co-m

mysql> SELECT * FROM APPLICANT_DOCUMENT;					
DOCUMENT_ID	DOCUMENT_TYPE	LAST_UPDATE_STATUS			
+	SoftCopy HardCopy HardCopy SoftCopy SoftCopy SoftCopy SoftCopy SoftCopy SoftCopy SoftCopy SoftCopy	2023-03-08 2023-02-20 2023-03-08 2023-03-04 2023-02-08 2023-02-20 2023-01-16 2023-02-08 2023-02-25 2023-02-28			
+		+			

mysql> SELECT * FROM APPLICATION_DETAIL;							
APPLICATION_ID	DATE_APPLICATION	EDUCATION_LEVEL	EXPERIENCE	SUBMISSION_FREQUENCY	DOCUMENT_ID	JOB_ID	
AP001	2023-03-01	Degree	5 Years	4	D001	J001	
AP002	2023-02-13	0-Level	4 Years	5	D002	J002	
AP003	2023-03-01	A-Level	3 Years	3	D003	J003	
AP004	2023-02-24	Degree	4 Years	1	D004	J004	
AP005	2023-02-01	Degree	13 Years	2	D005	J005	
AP006	2023-02-12	Degree	1 Years	6	D006	J006	
AP007	2023-01-09	Degree	5 Years	5	D007	J007	
AP008	2023-02-01	Master	10 Years	3	D008	J008	
AP009	2023-02-17	Degree	8 Years	5	D009	J009	
AP010	2023-02-20	Phd	10 Years	3	D010	J010	
+	+	+		<b>+</b>	+	++	

mysql> SELECT * FROM APPLICANT_CREDENTIAL;					
CREDENTIAL_ID	CRIME_RECORD	CREDIT_STATUS			
CR001	0	Excellent			
CR002	0	Good			
CR003	2	Poor			
CR004	0	Good			
CR005	1	Dissatisfaction			
CR006	0	Good			
CR007	0	Excellent			
CR008	0	Excellent			
CR009	0	Excellent			
CR010	0	Excellent			
+		++			

ID	FIRST_NAME		EMAIL	PHONENUMBER		HOME_ADDRESS	AC		CREDENTIA
+ N001		Louis	ericlouis90@gmail.com			No.20 Mankato Mississippi 96522 Selangor			CR001
1002	Adam	Zafar	adamz <mark>a</mark> far32@gmail.com	010-5990205	970123-13-6083	No.17 Frederick Nebraska 20620 Sarawak			CR002
1003		Fong	carlfong01@gmail.com	015-8448683	010308-02-9421	No1. Street Roseville 11523 Kedah			CR003
1004	Steve	Job	stevejob60@gmail.com	016-7667173	901220-09-7147	No.69 San Antonio 47096 Perlis			CR004
1005	Thomas	Musk	thomasmusk1884@gmail.com	013-9889696	840920-01-1421	No.67 Road Chelsea 67708 Johor		38	CR005
1006	Anakin	Yee	anakinyeeee@gmail.com	010-5984453	980715-14-8573	9, Jalan Kaskas, Taman Cheras, 52082 Cheras, Wilayah Persekutuan Kuala Lumpur, Malaysia			CR006
1007	Janice	Wong	Janiceee_77@gmail.com	019-3774189	920422-07-5104	84, Lebuh Pasar, George Town, 10933 George Town, Pulau Pinang			CR007
1008	Benedict	Cumberbatch	wizard123@gmail.com	016-8513312	850228-08-9655	40, Jalan Gunung Rapat, Taman Rapat Setia, 304 Ipoh, Perak			CR008
1009	Henry	Lau	henrylau1980@gmail.com	018-3364758	891225-01-2167	44, Jln Medini Sentral 5, 79194 Nusajaya, Johor			CR009
1010	Allan	Skywalker	allanskywalker99@gmail.com	011-7741258	880103-10-0473	54, Jalan Subang, Industries Park, 4761 Subang Jaya, Selangor			CR010

APPLICATION_ID   APPLICANT_ID   RESUME_PURPOSE    AP001   A001   Equipped with finance knowledge    AP002   A002   Ability in communication    AP003   A003   Ability in solving problem    AP004   A004   Ability in analyzing business data    AP005   A005   Ability in communication    AP006   A006   Ability in leadership and time management    AP007   A007   Equipped with finance knowledge    AP008   A008   Ability in communication    AP009   A009   Ability in analyzing business data	mysql> SELECT * FROM RESUME;					
AP002 A002 Ability in communication  AP003 A003 Ability in solving problem  AP004 A004 Ability in analyzing business data  AP005 A005 Ability in communication  AP006 A006 Ability in leadership and time management  AP007 A007 Equipped with finance knowledge  AP008 A008 Ability in communication  AP009 A009 Ability in analyzing business data	APPLICATION_ID	APPLICANT_ID	,			
1 Add   Eddipped with Tindhee knowledge	AP002   AP003   AP004   AP005   AP006   AP007   AP008	A002   A003   A004   A005   A006   A007   A008	Ability in communication Ability in solving problem Ability in analyzing business data Ability in communication Ability in leadership and time management Equipped with finance knowledge Ability in communication			

mysql> SELECT * FROM SELECTION_PROCESS;						
SELECTION_ID	APPOINTMENT_DATE	CANDIDATE_CATEGORY	JOB_RECRUITER	COMPANY_ID		
SE001	2023-03-27	Senior Level	Amy	C001		
SE002	2023-03-04	Junior Level	Sean	C002		
SE003	2023-03-26	Junior Level	Allan	C003		
SE004	2023-03-16	Senior Level	John	C004		
SE005	2023-02-25	Higher Level	Anderson	C005		
SE006	2023-03-04	Fresh Graduate Level	Emily	C006		
SE007	2023-01-30	Senior Level	Stan	C007		
SE008	2023-02-24	Higher Level	Robert	C008		
SE009	2023-03-11	Senior Level	Nicole	C009		
SE010	2023-03-15	Higher Level	Jacky	C010		
+	+	+	+	++		

mysql> SELECT * F	ROM APPLICANT_EVALUATION;		
EVALUATION_ID	OVERVIEW	RATING	APPLICATION_ID
EV001	Good learning ability	A	AP001
EV002	Job hopper	C	AP002
EV003	Weak leadership	C	AP003
EV004	Poor communication skill	D	AP004
EV005	Strong leadership	S	AP005
EV006	Lack of experience	C	AP006
EV007	Creative thinking	Α	AP007
EV008	Well experienced with professional knowledge based	Α	AP008
EV009	Good communication skill	В	AP009
EV010	Good problem solving skill	S	AP010
++		+	++

mysql> SELECT *	FROM BRANCH;		
SELECTION_ID	EVALUATION_ID	STATE	MEETING_ROOM_NO
SE001   SE002   SE003   SE004   SE005   SE006   SE007   SE008   SE009	EV001   EV002   EV003   EV004   EV005   EV006   EV007   EV008	Penang Sarawak Perak Selangor Perlis Melaka Pahang Johor	PN1
SE010 +	EV010 +	Selangor +	SE2   ++

mysql> SELECT * FROM APPLICATION_TEST;						
TEST_ID	START_TIME	END_TIME	TEST_CATEGORY	SCORE	APPLICATION_ID	
TT001	12:00:00	14:00:00	Perfomance-Based	95	AP001	
TT002   TT003	12:00:00 14:00:00	14:00:00   16:00:00	Perfomance-Based   Communication	70   60	AP002   AP003	
TT004	12:00:00	14:00:00	Behavioural	68	AP004	
TT005   TT006	14:00:00 12:00:00	16:00:00   14:00:00	Communication   Perfomance-Based	92   74	AP005     AP006	
TT007   TT008	14:00:00	16:00:00	Perfomance-Based	93	AP007     AP008	
TT008	14:00:00 12:00:00	16:00:00   14:00:00	Communication   Bahavioural	90   88	AP008     AP009	
TT010	14:00:00	16:00:00	Communication	97	AP010	

mysql> SELECT * FROM INTERVIEW;						
SELECTION_ID	TEST_ID	APPOINTMENT_TIME	QUESTION			
SE001	TT001	00:00:10	SETA1			
SE002	TT002	00:00:10	SETA3			
SE003   SE004	TT003   TT004	00:00:12   00:00:10	SETB2     SETC2			
SE005	TT005	00:00:12	SETB1			
SE006	TT006	00:00:10	SETA3			
SE007	TT007	00:00:12	SETA2			
SE008	TT008	00:00:12	SETB3			
SE009	TT009	00:00:10	SETC2			
SE010	TT010	00:00:12	SETB1			
+	+	+	++			

nysql> SELECT * FROM TEST_RESULT;						
RESULT_ID	KNOWLEDGE_GRADES	PRACTICAL_GRADES	ATTITUDE_GRADES	OVERALL_GRADES	TEST_ID	
R001	A	A	A	A	TT001	
R002	В	С	В	В	TT002	
R003	C	В	C .	C	TT003	
R004	C	C	A	В	TT004	
R005	A	Α	B	A	TT005	
R006	B	C	A	B	TT006	
R007	A	В	A	A	TT007	
R008	B	Α	A	Α	TT008	
R009	A	C	A	A	TT009	
R010	A	A	A	А	TT010	
+	+	+	+	+	++	

mysql> SELECT * FROM INTERVIEW_DECISION;					
DECISION_ID	HIRED_DECISION	PASS_STATUS	SELECTION_ID	RESULT_ID	
DD001	Yes	Pass	SE001	R001	
DD002	No	Fail	SE002	R002	
DD003	No	Fail	SE003	R003	
DD004	No	Fail	SE004	R004	
DD005	Yes	Pass	SE005	R005	
DD006	No	Fail	SE006	R006	
DD007	Yes	Pass	SE007	R007	
DD008	Yes	Pass	SE008	R008	
DD009	Yes	Pass	SE009	R009	
DD010	Yes	Pass	SE010	R010	
+	+	+	+	++	

### Other minimum 10 different SQL statements.

1. Display the overview of evaluation that obtaining rating A.

2. Display the test ID, test category and score for all start time at 14.00. Displays the result in ascending order.

```
mysql> select test_ID, test_category, score from application test
   -> where start_time like '12%'
   -> order by score;
 test_ID | test_category
                            score
 TT004
         Behavioural
                                 68
 TT002
           Perfomance-Based
                                 70
 TT006
           Perfomance-Based
                                 74
 TT009
           Bahavioural
                                 88
 TT001
         | Perfomance-Based |
                                 95
 rows in set (0.01 sec)
```

3. The appointment time were delayed by 30minutes Display the updated table.

```
mysql> update application test
   -> set start time=addtime(start time, '00:30:00');
Query OK, 10 rows affected (0.00 sec)
Rows matched: 10 Changed: 10 Warnings: 0
mysql> select * from application_test;
 TEST_ID | START_TIME | END_TIME | TEST_CATEGORY | SCORE | APPLICATION_ID |
         | 12:30:00 | 14:00:00 |
 TT001
                                   Perfomance-Based
                                                         95 | AP001
         | 12:30:00 | 14:00:00 | Perfomance-Based
| 14:30:00 | 16:00:00 | Communication
                                                       70
 TT002
                                   Perfomance-Based
                                                            AP002
                                                        60 | AP003
 TT003
 TT004
          12:30:00
                      | 14:00:00 | Behavioural
                                                        68 AP004
                      16:00:00 | Communication
                                                         92 | AP005
 TT005
          14:30:00
                      14:00:00
                                   Perfomance-Based |
          12:30:00
                                                         74 AP006
 TT006
                      16:00:00
          14:30:00
                                   Perfomance-Based
                                                         93
 TT007
                                                              AP007
           14:30:00 | 16:00:00 |
  TT008
                                   Communication
                                                         90
                                                              AP008
 TT009
           12:30:00
                        14:00:00
                                   Bahavioural
                                                         88
                                                              AP009
 TT010
          | 14:30:00 | 16:00:00 | Communication
                                                         97 | AP010
10 rows in set (0.00 sec)
```

4. Count the total number of vacancies for each job department.

5. Count the total submission frequency for each education level .Display the education level with total submission frequency greater than ()

6. Display the decision id that pass the interview and obtaining overall grade A.

```
ysql> select d.decision id, d.pass status,r.overall grades from interview decision d inner join test result r
   -> on r.result_id=d.result_id
   -> where overall_grades='A';
decision_id | pass_status | overall_grades |
DD001
               Pass
                             Α
DD005
                             A
A
A
               Pass
               Pass
DD007
DD008
               Pass
DD009
DD010
```

7. Generate a query to display the information of application detail arranged by a document type. The report should include the document type, application date, education level and experience.

8. Display the information of test result except overall grades by the decision ID that got hired under performance-based test category.

```
ysql> select d.decision_id,r.knowledge_grades,r.practical_grades,r.attitude_grades,a.test_id
   -> from interview_decision d inner join test_result r
   -> on r.result id=d.result id
   -> inner join application_test a on a.test_id=r.test_id
   -> where d.hired_decision='Yes' and a.test_category='perfomance-based';
decision_id | knowledge_grades | practical_grades | attitude_grades
DD001
              Α
                                 Α
                                                     Α
                                                                       TT001
             l A
                                                     Α
DD007
                                ΙВ
                                                                       TT007
rows in set (0.00 sec)
```

9. Show that maximim, minimum and average experience for degree education level.

```
      mysql> SELECT MAX(EXPERIENCE), MIN(EXPERIENCE), AVG(EXPERIENCE) FROM APPLICATION_DETAIL

      -> WHERE EDUCATION_LEVEL = 'DEGREE';

      +-----+

      | MAX(EXPERIENCE) | MIN(EXPERIENCE) | AVG(EXPERIENCE) |

      +-----+

      | 8 Years | 1 Years | 6 |

      +-----+

      1 row in set, 6 warnings (0.01 sec)
```

10. Delete the rows with job title business analyst. Display the result table.

from job_position;		
D   JOB_TITLE	JOB_PURPOSE	JOB_ID
Accountant	Management and reporting of financial data	J001
Social media manager	Identifying trends in customer interactions	J002
Technical support specialist	Providing technical support	J003
Sales trainee	Observing the sales process by assisting sales representatives	J005
Human resources manager	Overseeing the administrative functions of an organization	J006
Chief financial officer	Racking cash flow and financial planning	J007
Product manager	Identifying customer need and larger business objectives	J008
Finance manager	Budget planning	J010
	Social media manager   Technical support specialist   Sales trainee   Human resources manager   Chief financial officer   Product manager	Accountant

11. Select all the information from applicant between the age from 25 to 35.

APPLICANT_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONENUMBER	IC_NO	HOME_ADDRESS	AGE	CREDENTIAL_ID
A001	Eric	Louis	ericlouis90@gmail.com	012-9339692	941112-10-5847	No.20 Mankato Mississippi 96522 Selangor	29	CR001
A002	Adam	Zafar	adamzafar32@gmail.com	010-5990205	970123-13-6083	No.17 Frederick Nebraska 20620 Sarawak	26	CR002
A004	Steve	Job	stevejob60@gmail.com	016-7667173	901220-09-7147	No.69 San Antonio 47096 Perlis	33	CR004
A006	Anakin	Yee	anakinyeeee@gmail.com	010-5984453	980715-14-8573	9, Jalan Kaskas, Taman Cheras, 52082 Cheras, Wilayah Persekutuan Kuala Lumpur, Malaysia	25	CR006
A007	Janice	Wong	Janiceee_77@gmail.com	019-3774189	920422-07-5104	84, Lebuh Pasar, George Town, 10933 George Town, Pulau Pinang	31	CR007
A009	Henry	Lau	henrylau1980@gmail.com	018-3364758	891225-01-2167	44, Jln Medini Sentral 5, 79194 Nusajaya, Johor	34	CR009
A010	Allan	Skywalker	allanskywalker99@gmail.com	011-7741258	880103-10-0473	54, Jalan Subang, Industries Park, 4761 Subang Jaya, Selangor	35	CR010

#### First Normal Form (1NF)

JobRecruitmentSystem (Company ID, Job ID, Job Position ID, Job Category ID, Job Platform ID, Application ID, Applicant ID, Credential ID, Document ID, Selection ID, Evaluation ID, Decision ID, Test ID, Result ID, Decision ID, Company\_Name, Company\_Address, date\_published, num\_vacancies, Job\_Title, Job\_Purpose, Job\_Department, job\_opening\_medium, job\_searching\_link, date\_application, Education\_level, experience, submission\_frequency, resume\_purpose, First\_name, Last\_name, email, PhoneNumber, IC\_No, Home\_address, Age, Crime\_Record, Credit\_Status, Document\_Type, last\_update\_status, Appointment\_date, candidate\_category, Job\_Recruiter, State, MeetingRoomNo,Overview, Rating, start\_time, end\_time, score, Test\_Category, Appointment\_time, Question, Knowledge\_Grades, Practical\_Grades, Attitude\_Grades, hired\_decision, pass\_status)

#### **Partial Dependency**

```
Company_ID →Company_Name, Company_Address

Job_ID→date_published, num_vacancies, Job_Position_ID, Job_Title, Job_Purpose, Job_Category_ID,

Job_Department

Job_Platform_ID→job_opening_medim, job_searching_link

Application_ID→date_application, educational_level, experience, submission_frequency

Applicant_ID→First_name, Last_name, email, PhoneNumber, IC_No, Home_Address, Age, Credential_ID,

Crime_Record, Credit_Status

Applicant_Document→Document_Type, last_update_status

Selection_ID→Appointment_date, candidate_category, Job_Recruiter

Evaluation_ID→Overview, Rating

Test_ID→start_time, end_time, Score, Test_category

Result_ID→Knowledge_Grades, Practical_Grades, Attitude_Grades

Decision_ID→hired_decision, pass_status
```

#### **Full dependency**

Applicant\_ID, Application\_ID—resume\_purpose
Selection\_ID, Evaluation\_ID—State, MeetingRoomNo
Selection\_ID, Test\_ID— Appointment\_time, Question

# **Transitive Dependency Job Positon ID**→ Job Title

```
(Job_ID(A) → Job_Position(B)

Job_Position(B) → Job_Title (C))

Job_Category_ID → Job_Department

(Job_ID(A) → Job_Category_ID(B)

Job_Category_ID (B) → Job_Department(C))

Credential_ID → Crime_Record

(Applicant_ID(A) → Credential_ID(B)

Credential_ID (B) → Crime_Record(C))
```

# **Second Normal Form (2NF)**

Company(Company\_ID, Company\_Name, Company Address)

Job(<u>Job\_ID</u>, date\_published, num\_vacancies, Job\_Position\_ID, Job\_Title, Job\_Purpose, Job\_Category\_ID, Job\_Department)

Job\_Platform(<u>Job\_Platform\_ID</u>, job\_opening\_medium, job\_searching\_link)

Application\_Detail(Application\_ID, date\_application, education\_level, experience, submission\_frequency)

Applicant\_Document(Document\_ID, Document\_Type, last\_update, status)

Applicant (<u>Applicant\_ID</u>, First\_name, Last\_name, email, PhoneNumber, IC\_No, Home\_address, Age, Credential\_ID, Crime Record, Credit Status)

Resume(<u>Applicant\_ID</u>, <u>Application\_ID</u>, resume\_purpose)

Selection\_Process (Selection\_ID, Appointment\_date, candidate\_category, Job\_Recruiter)

Applicant\_Evaluation(<u>Evaluation\_ID</u>, Overview, Rating)

Branch (Selection\_ID, Evaluation\_ID, State)

Application\_Test(<u>Test\_ID</u>, start\_time, end\_time, Score, Test\_Category)

Interview (<u>Selection\_ID</u>, <u>Test\_ID</u>, Appointment\_time, Question)

Test\_Result (Result\_ID, Knowledge\_Grades, Practical\_Grades, Attitude\_grades)

Interview\_Decision( <u>Decision ID</u>, hired\_decision, pass\_status)

### Third Normal Form (3NF)

Company(Company\_ID, Company\_Name, Company Address)

Job(Job\_ID, date\_published, num\_vacancies)

Job\_Position(Job\_Position\_ID, Job\_Title, Job\_Purpose)

Job\_Category(<u>Job\_Category\_ID</u>, Job\_Department)

Job\_Platform(<u>Job\_Platform\_ID</u>, job\_opening\_medium, job\_searching\_link)

Application\_Detail(Application\_ID, date\_application, education\_level, experience, submission\_frequency)

Applicant Document(Document ID, Document Type, last update, status)

Applicant (Applicant ID, First name, Last name, email, PhoneNumber, IC No, Home address, Age)

Resume(<u>Applicant\_ID</u>, <u>Application\_ID</u>, resume\_purpose)

Applicant\_Credential(<u>Credential ID</u>, Crime\_Record, Credit\_Status)

Selection\_Process (Selection\_ID ,Appointment\_date, candidate\_category, Job\_Recruiter)

Applicant\_Evaluation(Evaluation ID, Overview, Rating)

Branch (Selection\_ID, Evaluation\_ID, State)

Application\_Test(<u>Test\_ID</u>, start\_time, end\_time, Score, Test\_Category)

Interview (<u>Selection\_ID</u>, <u>Test\_ID</u>, Appointment\_time, Question)

Test\_Result (Result ID, Knowledge\_Grades, Practical\_Grades, Attitude\_grades)

Interview\_Decision( <u>Decision\_ID</u>, hired\_decision, pass\_status)

### 8. Data Dictionary

Company

No	Data	Description	Туре	Length	PK/FK
1	Company_ID	Unique ID for each company	Varchar	10	PK
2	Company_Name	Name of company	Varchar	30	
3	Company Address	Address of company	varchar	100	

### Job

No	Data	Description	Туре	Length	PK/FK
1	Job_ID	Unique identifier for each job	Varchar	10	PK
2	Date_published	Date published	Date	10	
3	Num_vacancies	Number of job vacancies available	Integer	1	
4	Job_Platform_ID	Job platform ID	Varchar	10	FK

# Job\_position

No	Data	Description	Туре	Length	PK/FK
1	Job_Position_ID	Unique identifier for each job position	Varchar	10	PK
2	Job_Title	Title for the job	Varchar	100	
3	Job_Purpose	Purpose of the job	Varchar	100	
4	Job_ID	Job ID	Varchar	10	FK

### Job\_Category

No	Data	Description	Туре	Length	PK/FK
1	Job_category_ID	Unique category ID for the job	Varchar	10	PK
2	Job_Department	Name of the job department	Varchar	100	
3	Job_ID	Job ID	Varchar	10	FK

### Job Platform

No	Data	Description	Туре	Length	PK/FK
1	Job_Platform_ID	Unique platform ID for the job	Varchar	10	PK
2	Job_opening_medium	Job opening medium	Varchar	100	
3	Job_searching_link	Link for the Job searching	Varchar	100	

### Applicant\_Document

No	Data	Description	Туре	Length	PK/FK
1	Document_ID	Unique document ID for each applicant	Varchar	10	PK
2	Document_Type	Type of applicant's document	Varchar	10	
3	Last_update_status	Last update status of applicant document	Date	10	

### Application\_Detail

No	Data	Description	Туре	Length	PK/FK
1	Application_ID	Unique ID for each application detail	Varchar	10	PK
2	Date_application	Date of the job application	Date	10	
3	Education_level	Education level of the applicant	Varchar	10	
4	Experience	Working experience of the applicant	Varchar	10	

5	Submission_frequency	Frequency of the applicant's submission	Integer	1	
6	Document_ID	Document ID of applicant	Varchar	10	FK
7	Job_ID	Job ID	Varchar	10	FK

# Applicant\_Credential

No	Data	Description	Туре	Length	PK/FK
1	Credential_ID	Unique credential id for each applicant	Varchar	10	PK
2	Crime_record	Number of crime record	Integer	1	
3	Credit_status	Credit status of applicant	Varchar	20	

# Applicant

No	Data	Description	Туре	Length	PK/FK
1	Applicant_ID	Unique id for each applicant	Varchar	10	PK
2	First_name	First name of applicant	Varchar	20	
3	Last_name	Last name of applicant	Varchar	20	
4	Email	Email of applicant	Varchar	50	
5	Phonenumber	Phone number of applicant	Varchar	20	
6	IC_no	Ic number of applicant	Varchar	30	
7	Home_address	Address for applicant's home	Varchar	100	
8	Age	Age of applicant	Integer	2	
9	Credential_ID	Credential ID	Varchar	10	FK

### Resume

No	Data	Description	Туре	Length	PK/FK
1	Application_ID	Unique id for each application	Varchar	10	PK,FK1
2	2 Applicat_ID Unique id for each applicant		Varchar	10	PK,FK2
3	Resume_purpose	Purpose of the resume	Varchar	100	

# Selection\_Process

No	Data	Description Description		Length	PK/FK
1	Selection_ID	Unique selection ID for selection process	Varchar	10	PK
2	Appointment_date	Appointment date for selection process	Date	10	
3	Candidate_category	ndidate_category		30	
4	Job_recruiter Name of job recruiter		Varchar	10	
5	Company_ID	Company ID	Varchar	10	FK

# Applicant\_Evaluation

No	Data	Description	Туре	Length	PK/FK
1	Evaluation_ID	Unique evaluation ID for each applicant	Varchar	10	PK
2	Overview	Overview of applicant evaluation	Varchar	100	
3	Rating	Rating for applicant_evaluation	Varchar	5	
4	Application_ID	Application ID	Varchar	10	FK

### Branch

No	Data	Description	Туре	Length	PK/FK
1	Selection_ID	Unique selection ID for each branch	Varchar	10	PK,FK1
2	Evaluation_ID	Evaluation ID	Varchar	10	PK,FK2
3	State	State of branch	Varchar	20	
4	Meeting_room_no	Meeting room number	Varchar	10	

# Application\_Test

No	Data	Description	Туре	Length	PK/FK
1	Test_ID	Unique test ID for application test Varchar		10	PK
2	Start_time	Start time for the application test	Time	5	
3	End_time	End time for the application test	Time	5	
4	Test_Category	Category test for the application test	Varchar	20	
5	Score	Score for the application test	Integer	2	
6	Application_ID	Application ID for each application	Varchar	10	FK

### Interview

No	Data	Description	Туре	Length	PK/FK
1	Selection_ID	Unique selection id to interview	Varchar	10	PK,FK1
2	Test_ID	Test id for interview	Varchar	10	PK,FK2
3	Appointment_time	Appointment time for the interview	Time	5	
5	Question	Number of question asked by applicant	Varchar	100	

### Test result

No	Data	Description	Туре	Length	PK/FK
1	Result_ID	Unique result ID for each test result	Varchar	10	PK
2	Knowledge_grades Knowledge grade of applicant Varchar		Varchar	10	
3	Practical_grades	Practical grade of applicant	Varchar	10	
4	Attitude_grades	Attitude grade of applicant	Varchar	10	
5	Overall_grades	Overall grades for applicant	Varchar	10	
6	Test_ID	Test ID	Varchar	10	FK

#### Interview decision

No	Data	Description	Туре	Length	PK/FK
1	Decision_ID	Unique decision ID for interview decision	Varchar	10	PK
2	Hired_decision	Decision whether applicant get hired	Varchar	10	
3	Pass_status	Pass status from the interview	Varchar	10	
4	Selection_ID	Selection ID	Varchar	10	FK
5	Result_ID	Result ID	Varchar	10	FK

#### 9. References

[1] Job Portal System ER

Diagram, <a href="https://www.inettutor.com/diagrams/job-portal-system-er-diagram/">https://www.inettutor.com/diagrams/job-portal-system-er-diagram/</a>, July 10 2020.

[2] What is online recruitment and what are its advantages, What is Online Recruitment and What are Its Advantages? - Fountain Blog

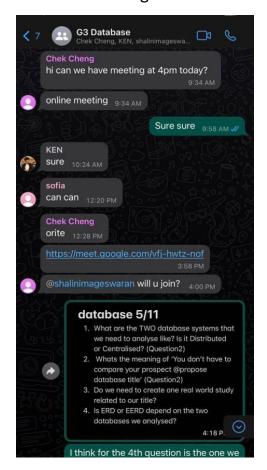
[3] Roshni jain, example Online Recruitment System Project, (DOC) Online RecruitmentSystem PROJECT | Atatanalisa Kamugisha - Academia.edu.

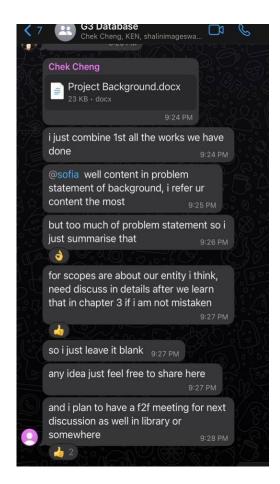
#### 10. Planning

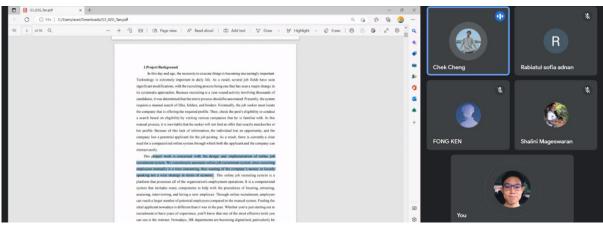
Jobscope	Members
Title discussion	Allmembers
Project background, Objectives, Scope	RABIATULSOFIA BT ADNAN
Manual process flowchart	KEN FONG KA KIN
Database system 1	RABIATULSOFIA BT ADNAN
Database system 2	DAVID LAU KING LUEN, KEN FONG KA KIN
Business rules	DAVID LAU KING LUEN
ERD	ALLMEMBERS
EERD	ALLMEMBERS
Structured Query Language (SQL)	ALL MEMBERS
(CREATE TABLES, ALTER, DROP,	
PRIMARY KEY, FOREIGN KEY, NOT	
NULL.)	
Structured Query Language (SQL)	ALLMEMBERS
(INSERT statement and other minimum	
10 different SQL statements.)	
Normalization	TAN CHEK CHENG
Data Dictionary (DD)	RABIATULSOFIA BT ADNAN
References	SHALINI MAGESWARAN
Planning	DAVID LAU KING LUEN, KEN FONG KA
	KIN
Meeting report contents	SHALINI MAGESWARAN

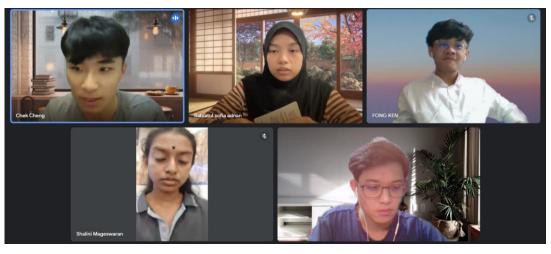
Group Meeting Report [NO]1				
Date	e:	Venue: Online	Attendees:	
	mber	Offiline	1. TAN CHEK CHENG	
2022,	•		2. KEN FONG KA KIN	
			3. DAVID LAU KING LUEN	
Tim		SCL Leader: TAN CHEK CHENG	4. SHALINI MAGESWARAN	
/ piii	ı-10pm	TAIN CHEK CHENG	5. RABIATUL SOFIA BT ADNAN	
No	Task I	List	Progress Task/	PIC
			Table	
			Involves/	
1	Project l	background discussion	-All the members did some research before start doing the mini project	All members
2	Project I	background	-Brainstorming about the project background	1) RABIATUL SOFIA BT ADNAN 2) TAN CHEK CHENG
3	Objectives		-Identifying the objectives of our project	1) SHALINI MAGESWARAN 2) RABIATUL SOFIA BT ADNAN
4	Scopes		-Identifying the scopes of our project	1) TAN CHEK CHENG 2) DAVID LAU KING LUEN 3) KEN FONG KA KIN
5	Checking of project background, objectives and scopes		-Do the final checking of project background, objectives and scopes	1) TAN CHEK CHENG

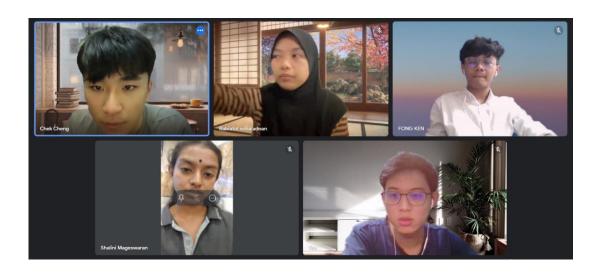
### Evidence of meeting





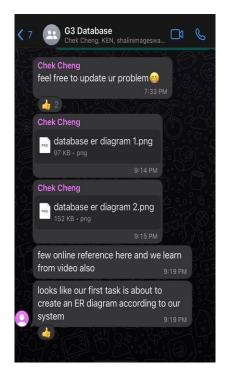


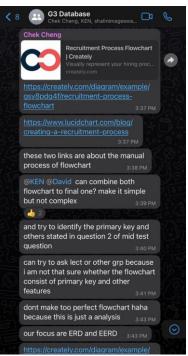




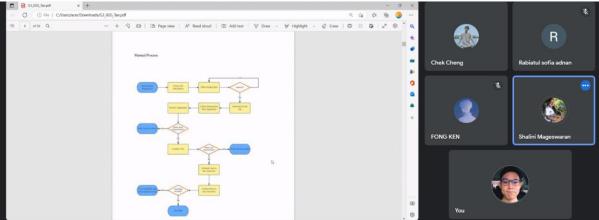
G	Group Meeting Report [NO] 2				
<b>Date</b> 13 <sup>th</sup> D 2022	e: ecember	Venue: Online	Attendees:  1. TAN CHEK CHENG		
Tim 7pm	n <b>e:</b> n-10pm	SCL Leader: TAN CHEK CHENG	<ul> <li>2. KEN FONG KA KIN</li> <li>3. DAVID LAU KING LUEN</li> <li>4. SHALINI MAGESWARAN</li> <li>5. RABIATUL SOFIA BT ADNAN</li> </ul>		
No	Task L	ist	Progress Task/ Table Involves/	PIC	
1	Discussion and EERI	on of flowchart, ERD D	-Investigate the manual process and analyze two database systems that relevant to our title	All members	
2	Flowchart		-Draw flowchart on manual process	1) KEN FONG KA KIN	
3	ERD and EERD based on database system 1		-Create ERD and EERD based on database system 1 -Write down their entities and attributes	1) RABIATUL SOFIA BT ADNAN 2) SHALINI MAGESWARAN	
4		EERD based on e system 2	-Create ERD and EERD based on database system 2 -Write down their entities and attributes	1) DAVID LAU KING LUEN 2) KEN FONG KA KIN	
5	Combine	e ERD and EERD	-Check ERD and EERD based on database system 1 and database system 2 and combine them together	1) TAN CHEK CHENG	

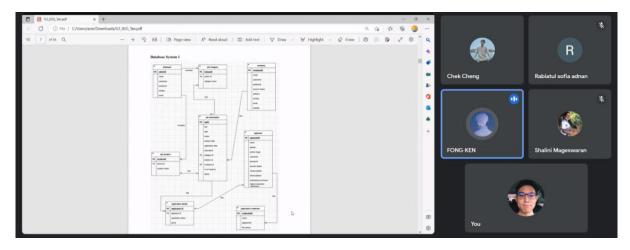
### Evidence of meeting

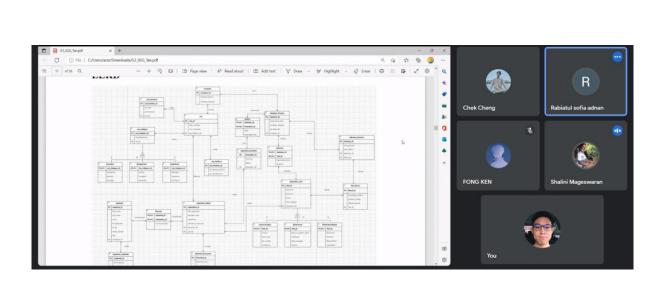




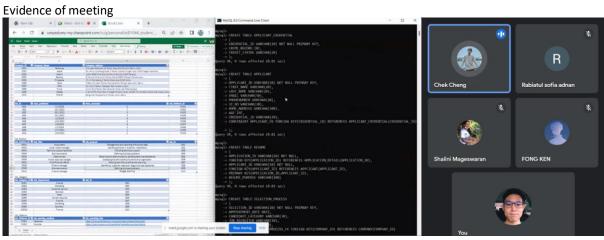


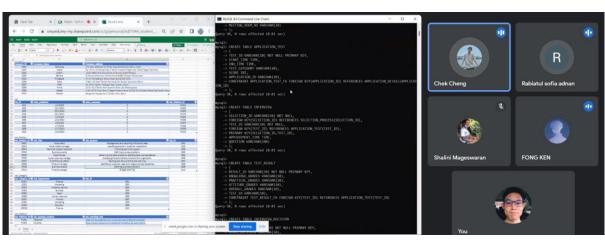






G	Group Meeting Report [NO] 3				
	e: December	Venue: Online	Attendees:		
2022			1. TAN CHEK CHENG		
			2. KEN FONG KA KIN		
			3. DAVID LAU KING LUEN		
<b>Tim</b> 7pm	e: -10pm	SCL Leader: TAN CHEK CHENG	4. SHALINI MAGESWARAN		
			5. RABIATUL SOFIA BT ADNAN		
No	Task L	ist	Progress Task/	PIC	
			Table		
			Involves/		
1	Business	rules	-Write business rules based on the ERD and EERD drawn	1) DAVID LAU KING LUEN	
2	2 Prepare data value		-Prepare data values using Excel	All the members.	
3	Create St Language	tructured Query e(SQL)	-Create SQL statements based on the EERD	All the members	
4	Insert Str Language	ructured Query e(SQL)	-Insert the data values into the tables in SQL	All the members	
5		nction of Structured nguage(SQL)	-Create other 10 different SQL statements	1) TAN CHEK CHENG 2) KEN FONG KA KIN	





Group Meeting Report [NO] 4				
		Venue:	Attendees:	
		Online	1. TAN CHEK CHENG	
			2. KEN FONG KA KIN	
			3. DAVID LAU KING LUEN	
Time: 12pm-5pm		SCL Leader: TAN CHEK CHENG	4. SHALINI MAGESWARAN	
			5. RABIATUL SOFIA BT ADNAN	
No	Task L	ist	Progress Task/	PIC
			Table	
			Involves/	
1	Normaliz		-Study normalization and create 1NF, 2NF and 3NF	All the members
			create Tivi, Zivi aliu Sivi	
2	Data dictionary		-Identify all the data dictionary	1) RABIATUL SOFIA BT ADNAN
3	References		-Find and combine the	1) SHALINI
				MAGESWARAN
4	0 1 1 1 2 2		-Check and summarize our mini	4) = 44 00 = 40 00 = 40
4	Check and combine all the files		project	1) TAN CHEK CHENG 2) KEN FONG KA KIN
				3) DAVID LAU KING LUEN
5	Submit final report		-Submit our mini project on UDAS	1) TAN CHEK
				CHENG

