



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

SECD/SCSD2523 DATABASE
Sem.1 2021/2022

INDIVIDUAL ALTERNATIVE ASSESSMENT

Technical Report

< E-Recruitment System >

<NASDAQ>

<Megat Irfan Zackry Bin Ismail>

< A20EC0205 >

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Interview Session

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Applicant Interview Session

#A220124
MEGAT IRFAN BIN ISMAIL
24 y.o
011-11934097
megatirfan@gmail.com

[Detail of Employment](#)

Overall Rating 9.1

TOP : 6th

Attendance : Present
← Session 1 →
Hiring Decision : Shortlisted

FEEDBACK	Interviewer 1	Interviewer 2	Interviewer 3
Education	A	A	A
Experience			
Management Aspect	A	A	A
Technical Aspect	B	B	B
Community Ability			
Verbal	A	A	A
Written	B	B	B
Leadership Maturity			
Ability to lead & influence	A	A	A
Intellectual Capacity			
Ability to reason & analyse things logically	A	A	A
Personal Qualities			
Confidence	A	A	A
Practical	A	B	B
Drive	A	A	A
Alertness	A	A	A
Teamworker	A	A	B
Friendliness	A	A	A
Integrity	A	A	A
General Knowledge	A	A	A

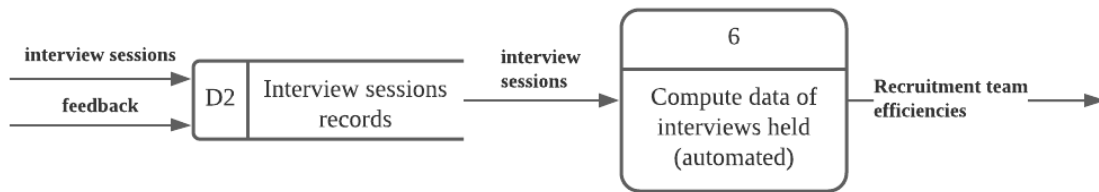
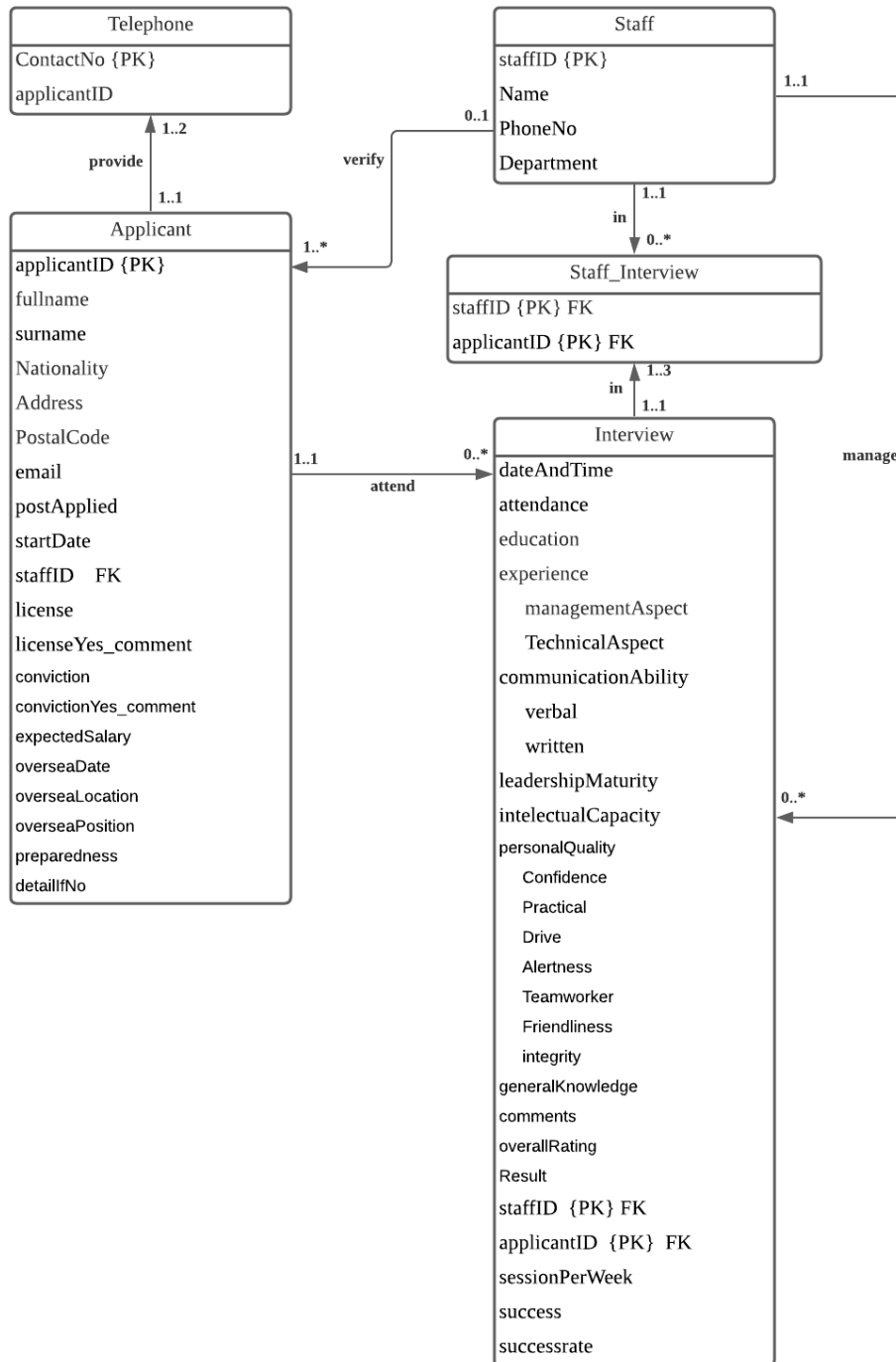


Figure 2: Module 6

2. SUMMARY OF DATABASE DESIGN AND PLANNING

2.1 LOGICAL ERD



2.2 RELATIONAL DATABASE SCHEMA

2.2.1	Telephone (<u>ContactNo</u> , applicantID) Primary Key: ContactNo Foreign Key: applicantID references Applicant (applicantID)
2.2.2	Staff (<u>staffID</u> , Name, PhoneNo, Department) Primary Key: staffID Foreign Key: PhoneNo
2.2.3	Staff_Interview (staffID, applicantID) Primary Key : staffID, applicantID Foreign Key : applicantID references Applicant(applicantID) Foreign Key : staffID references Staff(staffID)
2.2.4	Applicant (<u>applicantID</u> , staffID, fullname, surname, Nationality, Address, PostalCode, email, postApplied, startDate, license, licenseYes_comment, conviction, convictionYes_comment, expectedSalary, overseaDate, overseaLocation, overseaPosition, preparedness, detailIfNo) Primary Key: applicantID Foreign Key: staffID references Staff(staffID)
2.2.5	ApplicantInterviewDetail(applicantID, staffID, dateAndTime, attendance, education, managementAspect, TechnicalAspect, verbal, written, leadershipMaturity, intellectualCapacity, Confidence, Practical, Drive, Alertness, Teamworker, Friendliness, integrity, generalKnowledge, comments, overallRating, Result) Primary Key : applicantID, staffID Foreign Key : applicantID references Applicant(applicantID) Foreign Key : staffID references Staff(staffID)
2.2.6	InterviewAnalysis(staffID, sessionPerWeek, success, successrate) Primary Key : staffID Foreign Key : staffID references Staff(staffID) Derived successrate (success/sessionPerWeek)

2.3 DATA DICTIONARY

2.3.1 Telephone Table

Field Name	Data Type	Field Length	Constraint	Data Description
ContactNo	Number	13	Primary Key	Phone and home number of applicant
applicantID	Varchar	12	Foreign Key	Applicant NRIC or passport no

2.3.3 Staff Table

Field Name	Data Type	Field Length	Constraint	Data Description
staffID	Varchar	12	Primary Key	Staff personnel ID number
Name	Varchar	40	Not Null	Staff personnel full name
PhoneNo	Number	13	Not Null	Staff phone number
Department	Varchar	50	Not Null	Staff department

2.3.4 Staff_Interview Table

Field Name	Data Type	Field Length	Constraint	Data Description
staffID	Varchar	12	Primary Key	Staff personnel ID number
applicantID	Varchar	12	Primary Key	Applicant NRIC or passport no

2.3.2 Applicant Table

Field Name	Data Type	Field Length	Constraint	Data Description
applicantID	Varchar	12	Primary Key	Applicant NRIC or passport no
fullName	Varchar	40	Not Null	Applicant full name
surname	Varchar	15	Not Null	Applicant surname
Nationality	Varchar	20	Not Null	Nationality of applicant
Address	Varchar	50	Not Null	Address of applicant
PostalCode	Number	5	Not Null	Postal Code where applicant is staying
email	Varchar	20	Not Null	Email for applicant
postApplied	Varchar	20	Not Null	Position applied by applicant

startDate	Date		Not Null	Earliest date to start to work at company
staffID	Varchar	12	Foreign Key	Staff personnel ID number
license	Char	1	Nullable	Possession of license if applicant apply for driver position
licenseYes_comment	Varchar	50	Nullable	To provide detail if applicant has driver license
conviction	Char	1	Not Null	Information of user if ever convicted in Court of Law
convictionYes_comment	Varchar	50	Nullable	To provide detail if applicant has ever convicted in Court of Law
expectedSalary	Number	8	Not Null	Expected salary that put by applicant
overseaDate	Date		Nullable	Date of applicant if ever worked in oversea before
overseaLocation	Varchar	20	Nullable	Location of applicant if ever worked in oversea before
overseaPosition	Varchar	20	Nullable	Position of applicant if ever worked in oversea before
preparedness	Char	1	Not Null	The preparedness of applicant to work oversea
detailIfNo	Varchar	50	Nullable	Reason if applicant choose 'No' to the question of preparedness to work oversea

2.3.5 ApplicantInterviewDetail Table

Field Name	Data Type	Field Length	Constraint	Data Description
staffID	Varchar	12	Primary Key	Staff personnel ID number
applicantID	Varchar	12	Primary Key	Applicant NRIC or passport no

dateAndTime	Date		Not Null	Date and time of interview held
attendance	Char	1	Not Null	Attendance of applicant
Education	Char	1	Not Null	Education rating of applicant
managementAspect	Char	1	Not Null	Experience rating in the aspect of management of applicant
technicalAspect	Char	1	Not Null	Experience rating in the aspect of technical of applicant
verbal	Char	1	Not Null	Verbal communication ability rating for applicant
written	Char	1	Not Null	Written communication ability rating for applicant
LeadershipMaturity	Char	1	Not Null	Leadership maturity rating for applicant
IntellectualCapacity	Char	1	Not Null	Rating of ability to reason and analyze things logically for applicant
confidence	Char	1	Not Null	Confidence rating for applicant
practical	Char	1	Not Null	Practical rating for applicant
drive	Char	1	Not Null	Drive/vigor rating for applicant
alertness	Char	1	Not Null	Alertness rating for applicant
teamworker	Char	1	Not Null	Teamwork rating for applicant
friendliness	Char	1	Not Null	Friendliness rating for applicant
integrity	Char	1	Not Null	Integrity rating for applicant
GeneralKnowledge	Char	1	Not Null	General knowledge rating for applicant
Comments	Varchar	10	Nullable	Optional/additional comments for applicant
OverallRating	Number	2	Not Null	Overall rating for applicant
Result	Varchar	40	Not Null	Result of the interview either the applicant is shortlisted, KIV or rejected

2.3.6 InterviewAnalysis

Field Name	Data Type	Field Length	Constraint	Data Description
staffID	Varchar	12	Primary Key	Staff personnel ID number
sessionPerWeek	Number	20	Not Null	The number of interview session that is being held for every applicant in a week
success	Number	10	Not Null	The number of applicants that has been hired after the interview in a week
successrate	Number	3	Not Null	The number of applicants that has been chosen per week

3. SUMMARY SQL IMPLEMENTATION

3.1 REPORT OF DERIVED QUERIES

This module will interact with the company database by using set of queries . Below are derived queries for the module.

- [1 Table] Insert a new data of new arranged interview into the company database

```
INSERT INTO Staff Interview  
VALUES ('A22EC0137', 'S18HP0023');
```

Results Explain Describe Saved SQL History

1 row(s) inserted.

- [1 Table] Insert a new data of new interview detail into the company database

```
INSERT INTO ApplicantInterviewDetail  
VALUES ('A22EC0123', 'S18HP0023', TO_DATE('31-01-2022 15:30:00', 'DD-MM-YYYY HH24:MI:SS'),  
'Y', 'B', 'A', 'A', 'A', 'B', 'A', 'A', 'A', 'A', 'B', 'A', 'A', 'A', 'A', 'B', NULL, '9.1', 'Hired');
```

Results Explain Describe Saved SQL History

1 row(s) inserted.

3.2 SET OF QUERIES IN MODULE

Listed below are the list of queries that will be used for the transaction in the module.

Queries
INSERT INTO Staff_Interview VALUES ('A22EC0137', 'S18HP0023');
INSERT INTO ApplicantInterviewDetail VALUES ('A22EC0123', 'S18HP0023', TO_DATE('31-01-2022 15:30:00', 'DD-MM-YYYY HH24:MI:SS'), 'Y', 'B', 'A', 'A', 'A', 'B', 'A', 'A', 'A', 'A', 'B', 'A', 'A', 'A', 'A', 'B', NULL, '9.1', 'Hired');
INSERT INTO InterviewAnalysis VALUES ('S18HP0023', '4', '2', '92')
DELETE FROM Staff_Interview WHERE applicantID = 'A22EC0137';
DELETE FROM ApplicantInterviewDetail WHERE applicantID = 'A22EC0123';
UPDATE InterviewAnalysis SET sessionPerWeek = '5';
SELECT * FROM InterviewAnalysis
SELECT fullName, applicantID FROM Applicant WHERE applicantID = 'A22EC0123';
SELECT fullName, applicantID FROM Applicant WHERE fullName = 'Megat';
SELECT Department FROM Staff WHERE StaffID = 'S18HP0023';
SELECT * FROM Applicant JOIN ApplicantInterviewDetail USING (ApplicantID) WHERE applicantID = 'A22EC0123';
SELECT Applicant.applicantID, Applicant.dateAndTime FROM Applicant JOIN ApplicantInterviewDetail ON Applicant.applicantID = ApplicantInterviewDetail.applicantID WHERE ApplicantInterviewDetail.attendance = 'N';
SELECT Applicant.fullName, Applicant.applicantID FROM Applicant JOIN ApplicantInterviewDetail ON Applicant.applicantID = ApplicantInterviewDetail.applicantID WHERE ApplicantInterviewDetail.attendance = 'Y';

4. INTERFACE IMPLEMENTATION

INSERT INTO Staff_Interview
VALUES ('A22EC0137', 'S18HP0023');

UPDATE InterviewAnalysis
SET sessionPerWeek = '5';

SELECT *
FROM InterviewAnalysis

SELECT fullName, applicantID
FROM Applicant
WHERE fullName = 'Megat';

SELECT fullName, applicantID
FROM Applicant
WHERE applicantID = 'A22EC0123';

Interview Feedback

Monday 31th January 2022 15:30 IRFAN BIN MUBIN
A22EC0133 #S18HP0024 SUBMIT

	A	B	C	D
Education	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Experience				
Management Aspect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technial Aspect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community Ability				
Verbal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Written	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leadership Maturity				
Ability to lead & influence	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intellectual Capacity				
Ability to reason & analyse things logically	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Personal Qualities				
Confidence	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Practical	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drive	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alertness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teamworker	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Friendliness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Integrity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General Knowledge	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Interview Feedback

Name : Irfan Bin Mubin
Applicant ID : #A220133

Overall Rating Calculated : 9.1

Hiring Decision :

Leave a comment...

CONFIRM

```
INSERT INTO ApplicantInterviewDetail
VALUES ('A22EC0123', 'S18HP0023', TO_DATE('31-01-2022
15:30:00', 'DD-MM-YYYY HH24:MI:SS'), 'Y', 'B', 'A', 'A', 'A',
'B', 'A', 'A', 'A', 'A', 'A', 'B', 'A', 'A', 'A', 'A', 'B', NULL, '9.1', 'Hired');
```

Interview Records

Staff ID

Keep me logged in [Forgot ID](#)

LOGIN

```
SELECT Department
FROM Staff
WHERE StaffID = 'S18HP0023';
```

```
SELECT Applicant.applicantID,
Applicant.dateAndTime
FROM Applicant JOIN ApplicantInterviewDetail
ON Applicant.applicantID =
ApplicantInterviewDetail.applicantID
WHERE ApplicantInterviewDetail.attendance = 'Y';
```

Interview Session

Home Hiring Panel Search A18HP0023 Profile

Applicant ID:

Arrange new Interview

Upcoming Interview

Date	Applicant Name	Time
12 JAN	IRFAN BIN MUBIN	9:00 - 11:00
16 JAN	HAIKAL BIN ISHAK	1:00 - 3:00
28 JAN	CHAN GO YEN	1:00 - 3:00

Recent Interview

- AHMAD NAZRAN BIN YUSRI (#A22EC0132) [Click to see more detail](#)
- MEGAT IRFAN BIN ISMAIL (#A22EC0124) [Click to see more detail](#)
- BALQIS WAHIDAH BINTI BORHAM (#A22EC011) [Click to see more detail](#)

```
SELECT Applicant.applicantID,
Applicant.dateAndTime
FROM Applicant JOIN ApplicantInterviewDetail
ON Applicant.applicantID =
ApplicantInterviewDetail.applicantID
WHERE ApplicantInterviewDetail.attendance = 'N';
```

```
SELECT *
FROM Applicant JOIN ApplicantInterviewDetail
USING (ApplicantID)
WHERE applicantID = 'A22EC0123';
```

5. CONCLUSION

From this project, I have gained much knowledge regarding database. Even though I achieved the main goal of this module which is to insert data collected from interview sessions into the Interview table in the database and to handle any update or deletion of any data within the table, I still think the system and prototype have a lot of hidden potential. By completing this course, I am one step ahead for getting ready to be involve into database industry. I have not only achieved to create sets of queries needed for the module, I also achieved to implement those queries into a working prototype along the way. For me, this course is a very important course to be taken by every software engineering student to get exposure to handling databases both online and offline.

The case study picked for this project has a very clear view of showing how the real-business work with each other with different rank and position while having a very close relation with both System Analysis and Design, and Database which is why it was a great case study. My suggestion for the future is I think that it will be a great idea to be more involved into cyber security because any system that were ever built must have a way to protect itself.