



SECD/SCSD2523 DATABASE

Sem.1 2021/2022

INDIVIDUAL ALTERNATIVE ASSESSMENT

Technical Report

Intern Doctor System – Update Student Status Module

Group 5

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1. INTRODUCTION

1.1 OVERVIEW

The Intern Doctor System is an online internship platform that helps students find internship companies. The system involves four users, students, supervisors, companies and administrators, and the system also provides a document interface which consists of resume file, BLI-2A form, advertisement file, verification letter, rejection letter, and the employment history.

Students wishing to apply to a company must go through a process before proceeding to the Update Student Status module. First, students must log in to the system and fill in information such as name, ID number, email address, address, etc. Then, students can search for companies they want to intern. After that, the student needs to send the resume file to the company. The company will update whether the student application has been accepted or rejected.

The Updating Student Status module happens after the company has uploaded some student applications. When the company finds that a seat is available for a student, the company will finalize the student list and update the student's status to accept or decline.

In summary, the Update Student Status module is where the company will update the student status when the company has a seat available for the student.

1.2 OBJECTIVES AND SCOPE

My group had conducted an interview session with the stakeholder to obtain the information of the system requirements. By analyzing on the information, my group able to evaluate the strengths and weaknesses of the current system. After the discussion and brainstorming with the group members, we had come out with the idea of Intern Doctor System which able to improve the performance of the current system, Industrial Training System.

In order to make the project success, we had determined the objectives and the scope for this project. The objective of the project is to improve the performance of the current system by simplifying student applications and managing student progress, and to provide an online internship platform capable of managing different users for different jobs.

The scope of the project is user and system. Users are the people who use the system, and the proposed system can solve their limitations in the current system, so that they can easily do their jobs. Systems that provide different functions are also considered so that processes can be smooth, and tasks can be completed efficiently.

2. SUMMARY OF DATABASE DESIGN AND PLANNING

2.1 LOGICAL ERD

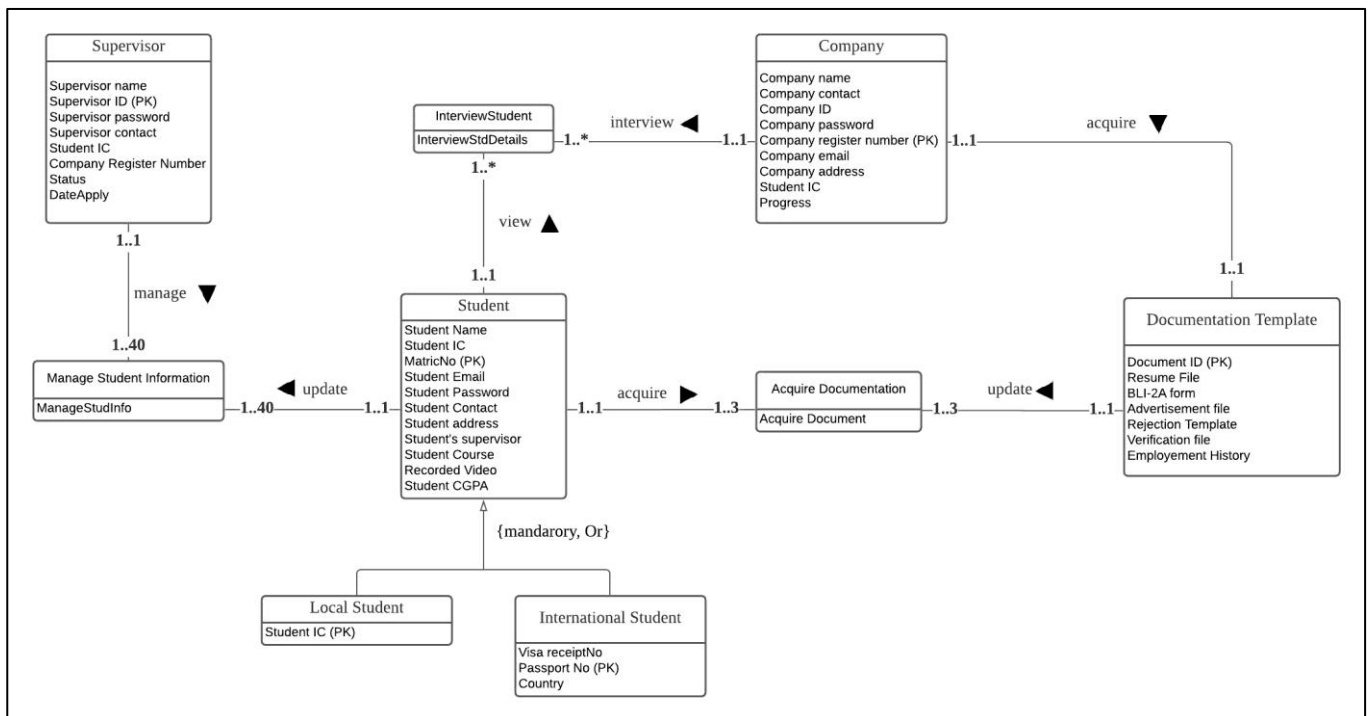


Figure 1: Logical ERD of the Update Student Status Module

2.2 RELATIONAL DATABASE SCHEMA

Normalization

Let:

A = MatricNo

B = studName

C = studIC

D = studEmail

E = studPass

F = studContact

G = studAddress
 H = studCourse
 I = recordedVideo
 J = CGPA
 K = supID
 L = supName
 M = supPassword
 N = supContact
 O = companyRegistrationNumber
 P = Status
 Q = DateApply
 R = CoID
 S = CoName
 T = CoContact
 U = CoPassword
 V = CoEmail
 W = CoAddress
 X = progress
 Y = VisaReceiptNo
 Z = PassportNo
 AA = Country

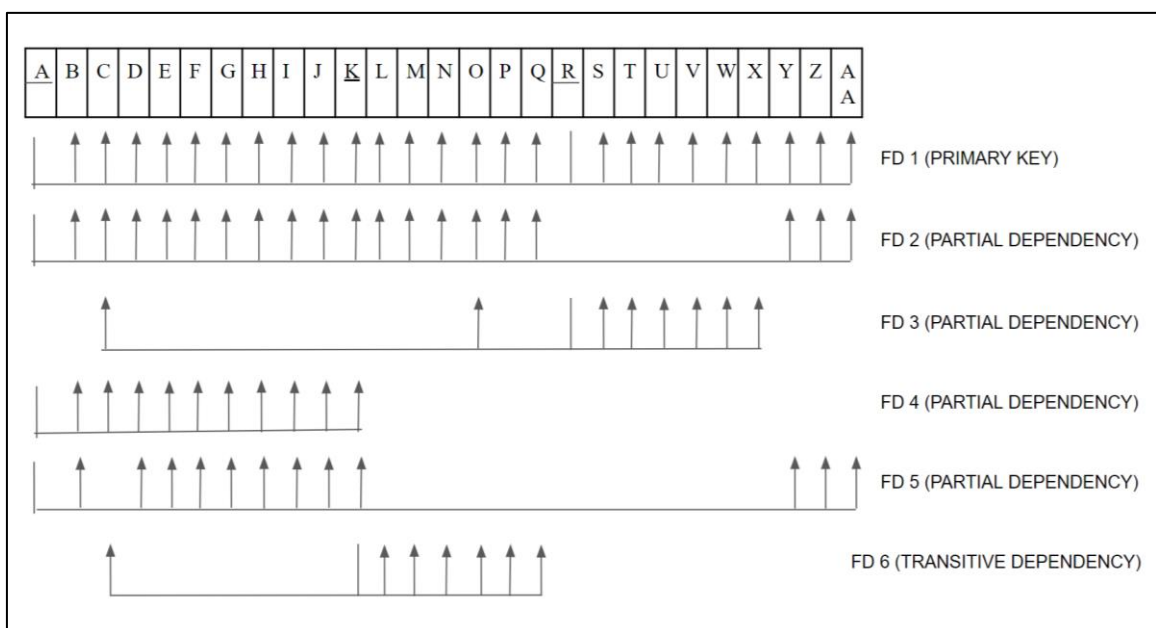


Figure 2: Functional Dependency for student, supervisor and company

FD1:

MatricNo, CoID -> studName, studIC, studEmail, studPass, studContact, studAddress, studCourse, recordedVideo, CGPA, supID, supName, supPassword, supContact, companyRegistrationNumber, Status, DateApply, CoName, CoContact, CoPassword, CoEmail, CoAddress, progress, VisaReceiptNo, PassportNo, Country (**Primary Key**)

FD2:

MatricNo-> studName, studIC, studEmail, studPass, studContact, studAddress, studCourse, recordedVideo, CGPA, supID, supName, supPassword, supContact, companyRegistrationNumber, Status, DateApply, VisaReceiptNo, PassportNo, Country (**Partial Dependency**)

FD3:

CoID -> studIC, companyRegistrationNumber, CoName, CoContact, CoPassword, CoEmail, CoAddress, progress (**Partial Dependency**)

FD4:

MatricNo -> studName, studIC, studEmail, studPass, studContact, studAddress, studCourse, recordedVideo, CGPA, supID (**Partial Dependency**)

FD5:

MatricNo -> studName, studIC, studEmail, studPass, studContact, studAddress, studCourse, recordedVideo, CGPA, supID, VisaReceiptNo, PassportNo, Country (**Partial Dependency**)

FD6:

supID -> supName, supPassword, supContact, studIC, companyRegistrationNumber, Status, DateApply (**Transitive Dependency**)

1NF:

UserDetails (MatricNo, studName, studIC, studEmail, studPass, studContact, studAddress, studCourse, recordedVideo, CGPA, supID, supName, supPassword, supContact, companyRegistrationNumber, Status, DateApply, CoID, CoName, CoContact, CoPassword, CoEmail, CoAddress, progress, VisaReceiptNo, PassportNo, Country)

2NF:

FD 2, FD 3, FD 4 and FD 5 violate 2 NF

Local_Student (MatricNo, studName, studIC, studEmail, studPass, studContact, studAddress, studCourse, recordedVideo, CGPA, supID)

International_Student (MatricNo, studName, studEmail, studPass, studContact, studAddress, studCourse, recordedVideo, CGPA, supID, VisaReceiptNo, PassportNo, Country)

Student_Supervisor (MatricNo, studName, studIC, studEmail, studPass, studContact, studAddress, studCourse, recordedVideo, CGPA, supID, supName, supPassword, supContact, companyRegistrationNumber, Status, DateApply, VisaReceiptNo, PassportNo, Country)

Company (CoID, studIC, companyRegistrationNumber, CoName, CoContact, CoPassword, CoEmail, CoAddress, progress)

3NF:

FD 4 and FD 6 violate 3 NF

Local_Student (MatricNo, studName, studIC, studEmail, studPass, studContact, studAddress, studCourse, recordedVideo, CGPA, supID)

FK: supID references Supervisor (supID)

International_Student (MatricNo, studName, studEmail, studPass, studContact, studAddress, studCourse, recordedVideo, CGPA, supID, VisaReceiptNo, PassportNo, Country)

FK: supID references Supervisor (supID)

Supervisor (supID, supName, supPassword, supContact, studIC, companyRegistrationNumber, Status, DateApply)

Company (CoID, studIC, companyRegistrationNumber, CoName, CoContact, CoPassword, CoEmail, CoAddress, progress)

Documentation

<u>Documentation</u> <u>ID</u>	ResumeFile	BLI- 2A Form	Advertisement File	Rejection Template	Verification Letter	Employment History
-----------------------------------	------------	--------------------	-----------------------	-----------------------	------------------------	-----------------------

FD1:

DocumentationID -> ResumeFile, BLI-2AForm, AdvertisementFile, RejectionTemplate, VerificationFile, EmploymentHistory (**Full Functional Dependency**)

Relation is in **3NF**.

Documentation (DocumentationID, ResumeFile, BLI-2AForm, AdvertisementFile, RejectionTemplate, VerificationFile, EmploymentHistory)

Relational Database Schema

Local_Student (MatricNo, studName, studIC, studEmail, studPass, studContact, studAddress, studCourse, recordedVideo, CGPA, supID)

FK: supID references Supervisor (supID)

International_Student (MatricNo, studName, studEmail, studPass, studContact, studAddress, studCourse, recordedVideo, CGPA, supID, VisaReceiptNo, PassportNo, Country)

FK: supID references Supervisor (supID)

Supervisor (supID, supName, supPassword, supContact, studIC, companyRegistrationNumber, Status, DateApply)

Company (CoID, studIC, companyRegistrationNumber, CoName, CoContact, CoPassword, CoEmail, CoAddress, progress)

Documentation (DocumentationID, ResumeFile, BLI-2AForm, AdvertisementFile, RejectionTemplate, VerificationFile, EmploymentHistory)

2.3 DATA DICTIONARY

Entity	Attribute	Description	Data Type & Length	NULL	Example
Local_Student	studName	Name of student	VARCHAR2 (100)	No	Ainin
	studIC	Unique IC number of the student	VARCHAR2 (15)	No	000113042222
	MatricNo	Unique number code of the student (Primary Key)	VARCHAR2 (20)	No	A20EC0001
	studEmail	Email of the student	VARCHAR (320)	No	aaa@gmail.com
	studPass	Unique password of the student	VARCHAR2 (30)	No	asio78-1
	studContact	Phone number of the student	VARCHAR2 (12)	No	0111111111
	studAddress	Home address of the student	VARCHAR2 (200)	No	1, Jalan UTM, 87090 Johor
	supID	ID of supervisor of the student (Foreign Key refers from Supervisor)	VARCHAR2 (5)	No	A001
	studCourse	Course of the student	VARCHAR2 (50)	No	Bachelor degree of bioinformatics
	recordedVideo	Video CV URL link	VARCHAR2 (200)	Yes	https://example video/1111.mp4
	CGPA	CGPA of the student	NUMBER (3, 2)	No	3.45
International_Student	studName	Name of student	VARCHAR2 (100)	No	Ainin
	MatricNo	Unique number code of the student (Primary Key)	VARCHAR2 (20)	No	A20EC0001

	studEmail	Email of the student	VARCHAR (320)	No	aaa@gmail.com
	studPass	Unique password of the student	VARCHAR2 (30)	No	asio78-1
	studContact	Phone number of the student	VARCHAR2 (12)	No	0111111111
	studAddress	Home address of the student	VARCHAR2 (200)	No	1, Jalan UTM, 87090 Johor
	supID	ID of supervisor of the student (Foreign Key refers from Supervisor)	VARCHAR2 (5)	No	A001
	studCourse	Course of the student	VARCHAR2 (50)	No	Bachelor degree of bioinformatics
	recordedVideo	Video CV URL link	VARCHAR2 (200)	Yes	https://example video/1111.mp4
	CGPA	CGPA of the student	NUMBER (3, 2)	No	3.45
	VisaReceiptNo	Visa number of students	VARCHAR2 (15)	No	AY11111111
	PassportNo	Passport number of students	VARCHAR2 (15)	No	S1111111H
	Country	Country of students	VARCHAR2 (100)	No	Singapore
Supervisor	SupName	Name of supervisor	VARCHAR2 (100)	No	Dr.Aiman
	SupID	Unique number code of the supervisor (Primary Key)	VARCHAR2 (5)	No	A001
	supPassword	Unique password of the supervisor	VARCHAR2 (30)	No	89&*qw
	supContact	Contact number of the supervisor	VARCHAR2 (30)	No	01122222222

	studIC	Unique IC number of the student	VARCHAR2 (15)	No	000113042222
	companyRegistrationNumber	Unique code number of the company	VARCHAR2 (30)	No	202201224R
	Status	Status of student's application	VARCHAR2 (12)	Yes	Applied
	DateApply	Date of student apply internship company	DATE	Yes	11-08-20
CompanyStudentProgress	CoName	Name of the company	VARCHAR2 (100)	No	Apple Inc.
	CoContact	Contact number of the company	VARCHAR2 (30)	No	032223333
	CoID	Unique ID for company to log in system (Primary Key)	VARCHAR2 (5)	No	C001
	CoPassword	Unique password of the company	VARCHAR2 (30)	No	88&**rr@3
	companyRegistrationNumber	Unique code number of the company	VARCHAR2 (20)	No	202201224R
	CoEmail	Email of the company	VARCHAR2 (50)	No	abc@gmail.com
	CoAddress	Address of the company	VARCHAR (200)	No	19, Jln Mutiara, Mount Austin, Johor
	studIC	Unique IC number/Visa receipt number of the student	VARCHAR2 (15)	No	000113042222
	progress	Student progress	VARCHAR2 (15)	No	Interviewed
Documentation Template	DocumentationID	Unique code for the document used by users (Primary Key)	VARCHAR2 (5)	No	DC109

	ResumeFile	Resume file for student to download	VARCHAR2 (200)	Yes	https://interdoctor/file/resumefile/dc005/a20ee0101
	BLI-2AForm	BLI-2A form for student or company to download	VARCHAR (255)	Yes	https://interdoctor/file/bli-2aform/dc002/c001
	AdvertisementFile	A file for the company to apply for a promotion position.	VARCHAR (255)	Yes	https://interdoctor/file/advertisementfile/dc002/c001
	RejectionTemplate	A file for students to download if they want to reject a company	VARCHAR (255)	Yes	https://interdoctor/file/rejectiontemplate/dc005/a20ee0101
	VerificationFile	Uploaded by supervisor to student so that student allow to be hired by company	VARCHAR (255)	Yes	https://interdoctor/file/verificationfile/dc003
	EmploymentHistory	Student can comment their experience when they intern in the company	VARCHAR (255)	Yes	https://interdoctor/comment/coID/dc003/b20ec0030

3. SUMMARY SQL IMPLEMENTATION

Below are some examples show the **INSERT** query:

```
INSERT INTO ComStudProgress (CoID, studIC_com, companyRegistrationNumber_com, CoName, CoContact, CoPassword, CoEmail, CoAddress, progress)
```

```
VALUES ( 'C001', '980101040222', '200601224R', 'ABC Company', '032223333', 'ABC**o1', 'abc@gmail.com', '10, Taman Mutiara, Johor Bahru, Johor', 'Interviewed' );
```

```
INSERT INTO Supervisor (supID, supName, supPassword, supContact, studIC_sup, companyRegistrationNumber_sup, Status, DateApply)
```

```
VALUES ( 'A001', 'Aris', 'Aris1010', '012-11111111', '001010011011', '202201224R', 'Applied', TO_DATE('11-08-20', 'DD-MM-YY') );
```

VALUES ('A20EC0003', 'Muthu A/L Gopal', '990105015546',
'muthu99@graduate.utm.my', 'muthu9955#', '0167788557', '13, Jalan Pisang 2, Taman
Indah, 80594, Johor Bahru, Johor', 'Bachelor Degree of Software Engineering', 3.75,
'A001');

INSERT INTO...VALUES is the command to tell system insert the values according to the listed field in the parentheses. Enter the table name after the insert into command to let system knows in which table the data should be entered. The column's name should be listed in the parentheses. The values for each column's name are listing after VALUES in the parentheses.

SELECT* FROM Conf(a@Progress);									
▼									
Results	Explain	Describe	Saved SQL	History					
COID	COMPANYREGISTRATIONNUMBER	COM	CONAME	COCONTACT	COPASSWORD	COEMAIL	COADDRESS	PROGRESS	STUDIC.COM
C001	2006012248		ABC Company	032223333	ABc**%1	abc@gmail.com	10, Taman Mutiara, Johor Bahru, Johor	Interviewed	980101040322
C002	2022011248		Top Glop Company	038088888	topgloP	topglo@hotmail.com	15, Jalan Austin Height, Mount Austin, Johor Bahru, Johor	Interviewed	900505046555
C003	2021012548		DataTop Company	034447777	topData	datatop@hotmail.com	No 2, Jalan Permas 11, Bandar Baru Permas Jaya, Johor Bahru 81750 Malaysia	Interviewed	001010011011
C004	2021023248		Bioinformatics Company	035551129	bio_infor	bioinfo@gmail.com	No 2, Jalan Waja 5, Taman Pendaris, 81100 JB	Interviewed	000310011021
C005	2019032548		biobio Company	036605665	biobio**88	biobio@gmail.com	No 106 & 108, Jalan Wong Ah Fook Lot J1-06, Level 1, Johor Bahru	Interviewed	001020011322

[illegible]

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SELECT*
FROM Local_Student;

Results	Explain	Describe	Saved SQL	History						
MATRICNO	STUDNAME	STUDIC	STUDEMAIL	STUDPASS	STUDCONTACT	STUDADDRESS	STDCOURSE	RECORDEDVIDEO	CGPA	SUP
A20EC0003	Muthu A/I, Gopal	990105015546	muthu99@graduate.utm.my	muthu09558	0167788557	13, Jalan Pisang 2, Taman Indah, 80594, Johor Bahru, Johor	Bachelor Degree of Software Engineering	-	3.75	A001
A20EA0018	Nural Salfiah Binti Maizan	991209058899	salihahMaizan@graduate.utm.my	salih04202	0195566777	105, Jalan Tun Razak 5/8, Taman Razak, 71500, Negeri Sembilan	Bachelor Degree of Civil Engineering	-	3.8	A002
A20EC0231	Lee Zi Wei	990615082210	leewei@graduate.utm.my	leewei3278	01110995555	66, Jalan Ipoh 5/8, Taman Ipoh, 30200, Ipoh, Perak	Bachelor Degree of Data Engineering	-	3.95	A003
A20EE0101	Stephen Mauritius	990729120026	stephen99@graduate.utm.my	steph0499	0172233445	88, Jalan Kota Kinabalu 5/8, Taman Kota Kinabalu, 88000, Kota Kinabalu, Sabah	Bachelor Degree of Electronic Engineering	-	3.85	A004
A20EM0056	Muhammad Shahril Bin Saiful	990412140876	muhammadshahril@graduate.utm.my	hellchahril	01630332988	2206, Blok E, Jalan Sungai 5/8, Taman Cerdental, 40000, Kuala Lumpur	Bachelor Degree of Mechanical Engineering	-	3.69	A005

3 rows returned in 0.01 seconds
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Figure 4: *SELECT* query to show Local_Student table

SELECT*
FROM supervisor;

Figure 5: *SELECT* query to show Supervisor table

```

SELECT MATRICNO, studname
FROM Local_Student
WHERE CGPA BETWEEN 3.75 AND 3.85;

```

Results	Explain	Describe	Saved SQL	History
MATRICNO		STUDNAME		
A20EC0003		Muthu A/I, Gopal		
A20EA0018		Nural Salfiah Binti Maizan		
A20EE0101		Stephen Mauritius		

3 rows returned in 0.00 seconds [Download](#)

Figure 6: *SELECT* query to show Matric No and studName column from Local_Student table

Explanation:

SELECT* FROM is the command that tells the system to display all the values in the table. The table name must be listed after **FROM**. Therefore, the system will know which table should be displayed and which columns should be displayed.

SELECT... FROM...WHERE is a command that tells the system to display only rows that satisfy a condition in a table. The column names which list after the **SELECT** and the table name which list after **FROM** tells the system which column and table should be considered. The conditions which list after **WHERE** tells the system which rows satisfy the condition.

Below are the examples of **DELETE** and **UPDATE** query:

DELETE FROM Documentation_Template

WHERE BLI_2AForm LIKE '%bli-2aform%';

ID	DOCUMENTATIONID	RESUMEFILE	BLI_2AForm	ADVERTISEMENTFILE	REACTIONTEMPLATE	VERIFICATIONTEMPLATE	EMPLOYMENTHISTORY
DC01	DC01	https://intenductorfile/resume/6021a2de011	-	-	https://intenductorfile/transactiontemplate/6021a2de011	-	-
DC03	DC03	https://intenductorfile/resume/6031b2de030	-	-	-	https://intenductorfile/verification/6031b2de030	https://intenductor.com/6031b2de030
DC04	DC04	https://intenductorfile/resume/6041c2de040	-	-	-	https://intenductorfile/verification/6041c2de040	-
DC05	DC05	https://intenductorfile/resume/6051d2de050	-	-	https://intenductorfile/transactiontemplate/6051d2de050	https://intenductorfile/verification/6051d2de050	https://intenductor.com/6051d2de050

Figure 7: *DELETE* query to delete the data which meet the condition

Explanation:

The table name Documentation_Template listed after **DELETE FROM** tells the system which table the system should look for. BLI_2AForm listed after **WHERE** tells the system which column of the system should be considered. The %bli-2aform% listed after **LIKE** tells the system that the data must be deleted if it consists of words of bli-2aform.

UPDATE ComStudProgress

SET Progress = 'NONE'

WHERE studIC_com = '980101040222';

EDIT	COID	COMPANYREGISTRATIONNUMBER_COM	CONAME	COCONTACT	COPASSWORD	COEMAIL	COADDRESS	PROGRESS	STUDIC_COM
	C001	200601224R	ABC Company	03222333	ABC**01	abc@gmail.com	10, Taman Mutiara, Johor Bahru, Johor	NONE	980101040222
	C002	202201224R	Top Glop Company	03888888	top*glop	topglop@hotmail.com	15, Jalan Austin Height, Mount Austin, Johor Bahru, Johor	Interviewed	990505046555
	C003	202201254R	DataTop Company	03444777	top*Data	datatop@hotmail.com	No. 2, Jalan Permas 11, Bandar Baru Permas Jaya, Johor Bahru 81750 Malaysia	Interviewed	001010011011
	C004	202102214R	Bioinformatics Company	035551129	bio_info88	bioinfo@gmail.com	No. 2 Jalan Waja 5, Taman Pandan, 81100 JB	Interviewed	000210011021
	C005	201903254R	biobio Company	03660565	biobio**88	biobio@gmail.com	No 106 & 108, Jalan Wong Ah Fook Lot J1-06, Level 1, Johor Bahru	Interviewed	001028011222

Download

Figure 8: *UPDATE* query to update the data which meet the condition

Explanation:

The table name ComStudProgress listed after **UPDATE** tells the system which table the system should look for. Progress = 'NONE' listed after **SET** tells the system which column of the system should be considered (Progress) and the data should be updated (NONE) when the condition is met. The studIC_com = '980101040222' listed after **WHERE** tells the system that if the value of student's IC, 980101040222 is met, then the progress must be uploaded to NONE.

UPDATE ComStudProgress

SET studIC_com = '990105015546'

WHERE studIC_com = '980101040222'

EDIT	COID	COMPANYREGISTRATIONNUMBER_COM	CONAME	COCONTACT	COPASSWORD	COEMAIL	COADDRESS	PROGRESS	STUDIC_COM
	C001	200601224R	ABC Company	032223333	ABC**p1	abc@gmail.com	10, Taman Mutiara, Johor Bahru, Johor	NONE	990105015546
	C002	202201224R	Top Glop Company	038888888	top*gloP	topglop@hotmail.com	15, Jalan Austin Heights, Mount Austin, Johor Bahru, Johor	Interviewed	990505046553
	C003	202201254R	DataTop Company	034447777	top*Data	datatop@hotmail.com	No. 2, Jalan Permai 11, Bandar Baru Permai Jaya, Johor Bahru 81750 Malaysia	Interviewed	001010011011
	C004	202102214R	Bioinformatics Company	035551129	bio_info88	bioinfo@gmail.com	No. 2 Jalan Waja 5, Taman Pandan, 81100 JB	Interviewed	000210011021
	C005	201903254R	biobio Company	036660565	biobio**88	biobio@gmail.com	No 106 & 108, Jalan Wong Ah Fook Lot J1-06, Level 1, Johor Bahru	Interviewed	001028011222

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Figure 9: UPDATE query to update the data which meet the condition

Explanation:

The table name ComStudProgress listed after UPDATE tells the system which table the system should look for. studIC_com = '990105015546' listed after SET tells the system which column of the system should be considered (studIC_com) and the data should be updated (990105015546) when the condition is met. The studIC_com = '980101040222' listed after WHERE tells the system that if the value of student's IC, 980101040222 is met, then the student's IC must be updated to 990105015546.

Below are examples of JOIN query:

<pre>SELECT ls.studName, ls.studIC, ls.studEmail, ls.studContact, c.progress FROM Local_Student ls JOIN ComStudProgress c on (ls.studIC = c.studIC_com);</pre>														
Results	Explain	Describe	Saved SQL	History										
<table> <tr> <th>STUDNAME</th><th>STUDIC</th><th>STUDEMAIL</th><th>STUDCONTACT</th><th>PROGRESS</th></tr> <tr> <td>Muthu A/I, Gopal</td><td>990105015546</td><td>muthu99@graduate.utm.my</td><td>0167788357</td><td>NONE</td></tr> </table> <p>1 rows returned in 0.01 seconds Download</p>	STUDNAME	STUDIC	STUDEMAIL	STUDCONTACT	PROGRESS	Muthu A/I, Gopal	990105015546	muthu99@graduate.utm.my	0167788357	NONE				
STUDNAME	STUDIC	STUDEMAIL	STUDCONTACT	PROGRESS										
Muthu A/I, Gopal	990105015546	muthu99@graduate.utm.my	0167788357	NONE										

Figure 10: JOIN query to join the data according to the listed column's name and the data which meet the condition

Explanation:

A new variable had been declared. Ls is the new variable for table Local_Student while c is the new variable for table ComStudProgress. Ls.studName, ls.studIC, ls.studEmail, ls.studcontact are refer to the Local_Student table, while the attribute after ls. is the column's name in the Local_Student table. C.progress is refer to the ComStudProgress table, while

progress is the column's name in the ComStudProgress table. FROM local_student ls JOIN ComStudProgress c tells the system to join both tables together. On (ls.studIC = c.studIC_com) is the condition for tables to join. Hence, when the student's IC in the local_student table is same as the student's IC in the ComStudProgress table, then the value of the student's name, student's IC, student's Email, student's contact and progress will be displayed.

```
SELECT supid, supname, supcontact, studname, studic, studcontact, studemail
FROM local_student JOIN supervisor
USING (studic)
WHERE supid = 'A001';
```

SUPID	SUPNAME	SUPCONTACT	STUDNAME	STUDIC	STUDCONTACT	STUDEMAIL
A001	Aris	012-1111111	Muthu A/L Gopal	990105015546	0167788557	muthu99@graduate.utm.my

1 rows returned in 0.00 seconds

Figure 10: JOIN query to join the data according to the listed column's name and the data which meet the condition

Explanation:

The column's name which had listed after SELECT tells the system which attributes should be considered. FROM Local_student JOIN supervisor means that the local student table will join with supervisor table. USING (supid) tells the system using supervisor's id to join the table and WHERE supid = 'A001' tells the system only show the joined table of the local student and supervisor if the supervisor's id is A001.

```
SELECT studname as "Student Name", studic as "Student IC", studcontact as "Contact Number", studemail as "Email", supid as "Supervisor ID", supname as "Supervisor Name"
FROM supervisor JOIN local_student
USING(supid)
```

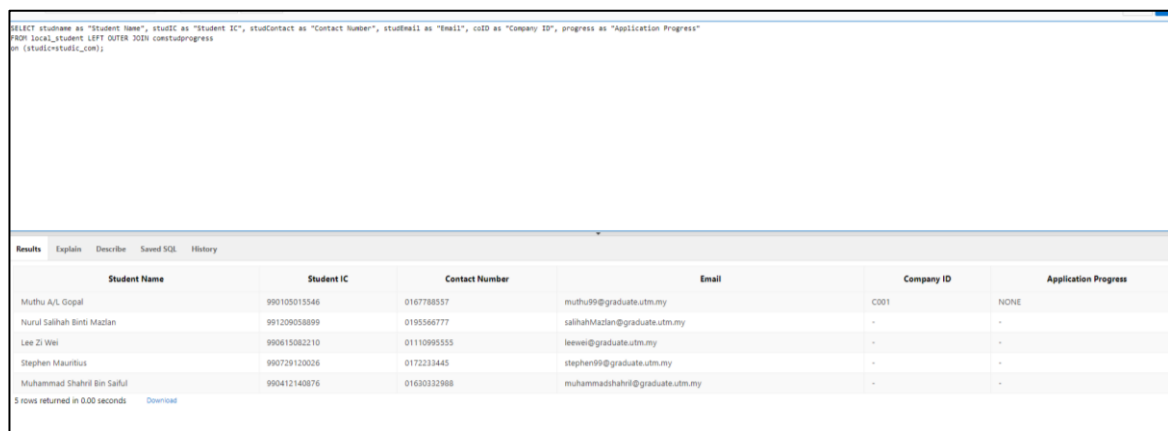
Student Name	Student IC	Contact Number	Email	Supervisor ID	Supervisor Name
Muthu A/L Gopal	990105015546	0167788557	muthu99@graduate.utm.my	A001	Aris
Nurul Salihah Binti Mazlan	991209058899	0195566777	salihahMazlan@graduate.utm.my	A002	Adam
Lee Zi Wei	990615082210	01110995555	leewei@graduate.utm.my	A003	Shafao
Stephen Maurillus	990729120026	0172233445	stephen99@graduate.utm.my	A004	Dayang
Muhammad Shahrol Bin Saiful	990412140676	01630332988	muhammadshahrol@graduate.utm.my	A005	Chin Li Li

5 rows returned in 0.00 seconds

Figure 11: JOIN query to join the data according to the listed column's name and the data which meet the condition

Explanation:

The column's name which had listed after SELECT tells the system which attributes should be considered. As had been used to rename the column's name. For example, studname as "Student Name" tells the system change the studName to Student Name. FROM supervisor JOIN local_student means that the local student table will join with supervisor table. USING (supid) tells the system using supervisor's id to join the table.



```
SELECT studname as "Student Name", studic as "Student IC", studcontact as "Contact Number", studemail as "Email", coID as "Company ID", progress as "Application Progress"
FROM local_student LEFT OUTER JOIN comstudprogress
on (studic=studic_com);
```

Student Name	Student IC	Contact Number	Email	Company ID	Application Progress
Muthu A/L Gopal	990105015546	0167788557	muthu99@graduate.utm.my	C001	NONE
Nurul Salihah Binti Maclean	991209058899	0195566777	salihahMaclean@graduate.utm.my	-	-
Lee Zi Vlei	990615082210	01110995555	leewei@graduate.utm.my	-	-
Stephen Mauritus	990729120026	0172233445	stephen99@graduate.utm.my	-	-
Muhammad Shahril Bin Saiful	990412140876	01630332908	muhammadshahril@graduate.utm.my	-	-

5 rows returned in 0.00 seconds [Download](#)

Figure 12: JOIN query to join the data according to the listed column's name

Explanation:

The column's name which had listed after SELECT tells the system which attributes should be considered. As had been used to rename the column's name. For example, studname as "Student Name" tells the system change the studName to Student Name. FROM local_student LEFT OUTER JOIN comstudprogress tells the system to join both tables together. LEFT OUTER JOIN means that if the condition is not met, return “-” in the table. On (studic=studic_com) means that the condition is student's IC in local_student table is same as student' IC in ComStudProgress table. Therefore, only when the student's IC in both tables is the same, then the value for company's ID and progress will be displayed, otherwise display “-”.

4. INTERFACE IMPLEMENTATION

The screenshot displays the 'INTERN DOCTOR SYSTEM' interface. At the top, there's a header with a logo and the system name. Below this, a section for 'Company Information' shows details for 'ABC Company' with ID 'C001'. The company details include: Company Name: ABC Company, Company Registration Number: 202201224R, Company Contact: 034447777, Company Email: abc@gmail.com, and Company Address: 10, Taman Mutiara, Johor Bahru, J. Below the company information, there's a 'Student Information' section. It lists two students: 'Muthu A/L Gopal' (ID: A20EC0003) and 'Nurul Salihah Binti Mazlan' (ID: A20EA00182). Each student entry includes their name, IC, contact, email, resume file, progress, and interview date. A dropdown menu for 'Progress' is open, showing options: NONE, Accepted Application, Rejected, Interviewed, and Hired. The 'Accepted Application' option is selected.

```
SELECT CoID,
companyRegistrationNumber_com,
CoName, CoContact, CoEmail,
CoAddress
FROM ComStudProgress
```

```
SELECT MatricNo, studName, studIC,
studContact, studEmail, resumefile, progress
FROM Local_Student JOIN
Documentation_Template
ON (document_ID = documentationID)
JOIN ComStudProgress
ON (studIC = studIC_com)
```

```
ALTER TABLE Local_Student
ADD document_ID VARCHAR2 (5)
```

```
INSERT INTO
ComStudProgress (CoID,
companyRegistrationNumber_com,
CoName, CoContact,
CoEmail, CoAddress, Progress,
studIC_com)
VALUES ('C001',
'202201224R', 'ABC Company',
'034447777', 'abc@gmail.com',
'10, Taman Mutiara, Johor Bahru,
Johor', 'Accepted Application',
'990105015546')
```

INTERN DOCTOR SYSTEM

Company Name: ABC Company

Company Registration Number: 202201224R

Company Contact: 034447777

Company Email: abc@gmail.com

Company Address: 10, Taman Mutiara, Johor Bahru, Johor

ID: C001

[Community](#) | [Document](#) | [Chatbox](#) | [Interview](#)

Student Information

ID: A20EC0003

Student Name: Muthu A/L Gopal

Student IC: 990105015546

Student Contact: 0167788557

Student Email: muthu99@graduate.utm.my

*Press here to enter student profile

Resume File: [resumeFile.A20EC0003](#)

Progress: ✓ NONE

Interview Date: 02

DELETE FROM Local_Student

WHERE studIC = '991209058899'

ID: A20EA00182

Student Name: Nurul Sa

Student IC: 9912090

Student Contact: 01955667

Student Email: salihahMa

*Press here to enter student profile

Interview Date:

INTERN DOCTOR SYSTEM

Supervisor Name: Aris

Supervisor Contact: 012-11111111

ID: A001

[Community](#) | [Document](#) | [Chatbox](#)

Student Information

ID: A20EC0003

Student Name: Muthu A/L Gopal

Student IC: 990105015546

Student Contact: 0167788557

Student Email: muthu99@graduate.utm.my

*Press here to enter student profile

Resume File: [resumeFile.A20EC0001](#)

Progress: Accepted Application

Interview Date:

SELECT supID, supName, supConatact

FROM Supervisor

ID: A20EA00182

Student Name: Nurul Salihan Binti Mazlan

Student IC: 991209058899

Student Contact: 0195566777

Student Email: salihahMazlan@graduate.utm.my

*Press here to enter student profile

Resume File: [resumefile.A16EC0002](#)

Progress: NONE

Interview Date:

```

SELECT MatricNo, studName, studIC, studContact,
studEmail, resumefile, progress
FROM Local_Student JOIN Documentation_Template
ON (document_ID = documentationID)
JOIN ComStudProgress
ON (studIC = studIC_com)

```

```

UPDATE ComStudProgress
SET Progress = 'Accepted Application'
WHERE studIC =
'990105015546'

```

INTERN DOCTOR SYSTEM

Student Name: Muthu A/L Gopal
Student IC: 990105015546
Student Contact: 0167788557
Student Email: muthu99@graduate.utm.my

ID: A20EC0003

Supervisor
Company
Community
Document
Chatbox
Interview

Profile

Status

Matric No: A20EC0001

Address: No 1, Jalan Utama Satu, Skudai, Johor

Course: Bachelor of Degree of Computer Science (Bioinformatics)

CGPA: 3.33

Supervisor: Aris

Recorded CV: [REDACTED]

```

SELECT ls.MatricNo, ls.studName, ls.studIC,
ls.studContact, ls.studEmail, ls.studAddress,
ls.stdCourse, ls.CGPA, ls.recordedVideo,
s.supName
FROM Local_Student ls JOIN Supervisor s
ON (ls.supID = s.supID)

```

```

SELECT MatricNo, studName, studIC,
studContact, studEmail, studAddress,
stdCourse, recordedVideo, CGPA,
supID
FROM Local_Student

```

INTERN DOCTOR SYSTEM

Student Name: Muthu A/L Gopal
Student IC: 990105015546
Student Contact: 0167788557
Student Email: muthu99@graduate.utm.my

ID: A20EC0003

Supervisor
Company
Community
Document
Chatbox
Interview

Profile

Status

List of Company

Company Name: ABC Company
Company Registration Number: 202201224R
Company Contact: 034447777
Company Email: abc@gmail.com
Company Address: 10, Taman Mutiara, Johor Bahru, Johor
Progress: Accepted Application

ID: C001

```

UPDATE ComStudProgress

```

```

SET Progress = 'Accepted Application'

```

```

WHERE studIC = '990105015546'

```

```

SELECT CoID, companyRegistrationNumber_com, CoName, CoContact,
CoEmail, CoAddress, Progress

```

```

FROM ComStudProgress

```

5. CONCLUSION

Our proposed system is able to automatically update student status in the views of students and supervisors. We have improved this feature by detecting company-updated student status and automatically updating to student and supervisor profiles. This feature saves the supervisor's time and facilitates management. This is because supervisors do not have to wait for student notification. Supervisors have direct access to student progress.

In addition to the modules I do, our group improves the current system by providing various features and functions to make the system work efficiently. For example, we included the company as one of the users. Companies are able to promote themselves and not miss applications from students.

While working on this project, we faced many constraints. The first limitation is the time to complete the project. We have limited time to discuss each task and not much time for research. Therefore, lack of time is arguably the main issue in completing this project.

Secondly, biased views are also one of the limitations of our group's projects. Because of our different backgrounds, each group member has a different perspective, so we will only find data that supports our perspective. This had a big impact on our group discussions because we needed to spend a lot of time to determine results.

All team members showed their efforts while working on this project. Attend webinars to get ideas for completing the project, interview with stakeholders, discuss each task together and correct mistakes together. We also shared a lot of ideas to make this project a success. All team members work as a team to address performance issues with current systems and develop new systems.

Due to limitations and experience while doing this project, my advice for future research is that it is very important to do a preview or do a study before doing the project. It can help us get some ideas, so we don't rush things when we're working on a project. In this way, we can save a lot of time when doing projects.

Then, open minded is very important for team working. Willing to accept other's idea can help us to create a positive working environment. When we are open to listen others, then we can find out the greater solution quickly. Hence, I would suggest that to be open minded for future study.

Last but not least, it is better to study and research more, and also discuss with the project consultant more. Because too much time was spent on changing contradictory parts, and caused our group did not have time to do new tasks.