

#### Assumptions:

1. I have assumed that there can be newly introduced sports without any students.
2. I have assumed that each new lecturer is mentored by one and only one senior lecturer.
3. I have assumed that there can be full-time students who are not doing any sports.
4. I have assumed that each course can be managed by at least one or many lecturers and also there can be or can not be any lecturers who are managing courses.

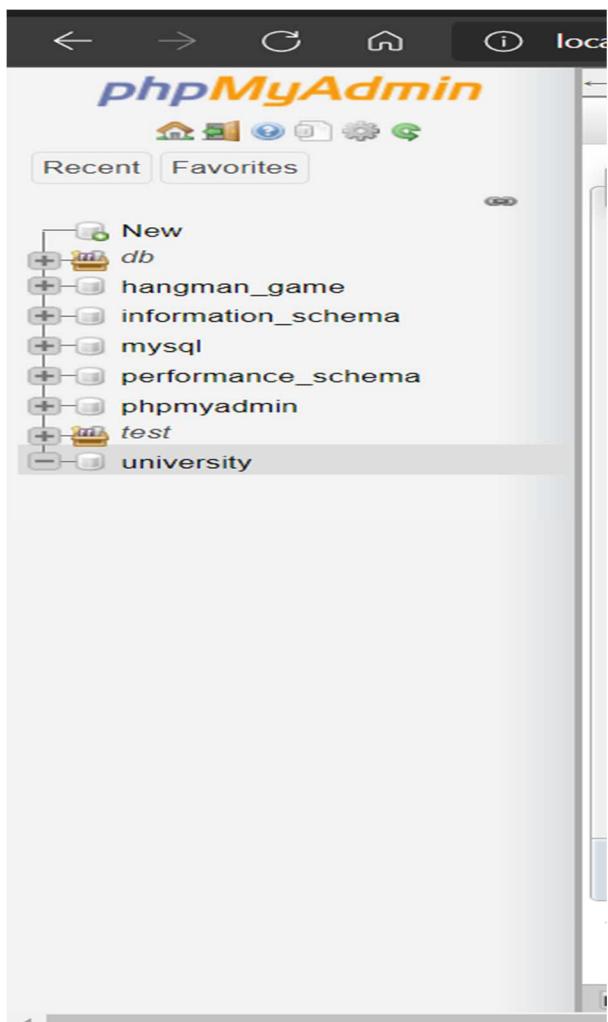
5. I have assumed that new lecturers are embedded into the junior lecturer category.
6. I have assumed that a module leader can be a junior lecturer or a senior lecturer.
7. I have assumed that one newcomer can be mentored by one and only one senior lecturer.



## Normalization

1. These tables satisfy the 1NF because all the values are atomic, column names are unique in each tables and all the values stored in a particular columns are of same domain.
2. These tables also satisfy the 2NF as there are no partial dependencies.
3. And, there is no transitive dependency, hence the tables also satisfy the 3NF.
4. These tables also satisfy the BCNF as there are no functional dependency anomalies.

```
CREATE DATABASE university;
```



```
CREATE TABLE course(  
    course_code CHAR(7) NOT NULL,  
    course_name VARCHAR(50) NOT NULL,  
    PRIMARY KEY (course_code));
```

The screenshot shows the phpMyAdmin interface for a MySQL database named 'university'. The left sidebar lists databases: db, hangman\_game, information\_schema, mysql, performance\_schema, phpmyadmin, test, university, and course. The 'course' database is selected. The main area displays the 'course' table with the following structure:

course_code	course_name

A message at the top indicates: "MySQL returned an empty result set (i.e. zero rows). (Query took 0.0016 seconds.)". Below the table, there is a SQL query editor with the following code:

```
SELECT * FROM `course`
```

Below the query, there are several buttons: Profiling, Edit inline, Edit, Explain SQL, Create PHP code, and Refresh. A 'Query results operations' section contains a 'Create view' button. A 'Bookmark this SQL query' section allows users to enter a label and choose if every user can access it, with a 'Bookmark this SQL query' button.

```
CREATE TABLE payment(
    payment_id CHAR(5) NOT NULL,
    amount FLOAT NOT NULL,
    PRIMARY KEY (payment_id));
```

The screenshot shows the phpMyAdmin interface for the 'university' database. The 'payment' table is selected. The table structure is as follows:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	payment_id	char(5)	utf8mb4_general_ci		No	None			<a href="#">Change</a> <a href="#">Drop</a> <a href="#">More</a>
2	amount	float			No	None			<a href="#">Change</a> <a href="#">Drop</a> <a href="#">More</a>

Below the table structure, there are tabs for 'Indexes', 'Partitions', and 'Console'. The 'Indexes' tab shows a single primary key index:

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment	
<a href="#">Edit</a>		Drop	PRIMARY	BTREE	Yes	No	payment_id	10	A	No

```

CREATE TABLE fulltime_student (
    st_id CHAR(7) NOT NULL,
    first_name VARCHAR(20) NOT NULL,
    middle_name VARCHAR(20),
    sur_name VARCHAR(50) NOT NULL,
    address VARCHAR(100) NOT NULL,
    gender VARCHAR(10),
    date_of_birth DATE,
    PRIMARY KEY (st_id));

```

The screenshot shows the phpMyAdmin interface running on a local server at 127.0.0.1. The left sidebar displays a tree view of databases: db, hangman\_game, information\_schema, mysql, performance\_schema, phpmyadmin, test, and university. Under the university database, there are three tables: New, course, and fulltime\_student, with fulltime\_student being the currently selected table. The main panel shows the results of a SQL query: "SELECT \* FROM `fulltime\_student`". The results grid has columns: st\_id, first\_name, middle\_name, sur\_name, address, gender, and date\_of\_birth. A message at the top indicates an empty result set. Below the results, there are "Query results operations" like "Create view" and a "Bookmark this SQL query" section with a "Label:" input field and a checkbox for "Let every user access this bookmark". A "Bookmark this SQL query" button is also present. At the bottom of the main panel is a "Console" tab.

```
CREATE TABLE parttime_student (
    st_id CHAR(7) NOT NULL,
    first_name VARCHAR(20) NOT NULL,
    middle_name VARCHAR(20),
    sur_name VARCHAR(50) NOT NULL,
    address VARCHAR(100) NOT NULL,
    gender VARCHAR(10),
    date_of_birth DATE,
    occupation VARCHAR(300) NOT NULL,
```

**PRIMARY KEY (st\_id));**

The screenshot shows the phpMyAdmin interface for MySQL version 17/0.0.1. The database selected is 'university'. In the left sidebar, the 'parttime\_student' table is selected under the 'fulltime\_student' database. The main area displays the SQL query: 'SELECT \* FROM `parttime\_student`' which resulted in an empty result set. Below the query, there are options to bookmark the query, including fields for 'Label' and a checkbox for 'Let every user access this bookmark'. At the bottom of the interface, there is a 'Console' tab.

```
CREATE TABLE fulltime_student_phone(
    full_st_id CHAR(7) NOT NULL,
    phone_num VARCHAR(20) NOT NULL,
    PRIMARY KEY (full_st_id,phone_num),
    FOREIGN KEY (full_st_id)
    REFERENCES fulltime_student(st_id));
```

The screenshot shows the phpMyAdmin interface for the 'university' database. The left sidebar lists databases and tables. The main area shows the 'fulltime\_student\_phone' table with the following details:

- Message: MySQL returned an empty result set (i.e. zero rows). (Query took 0.0026 seconds.)
- SQL Query: `SELECT * FROM `fulltime_student_phone``
- Operations: `Create view`
- Bookmark: `Bookmark this SQL query`
  - Label:
  - Let every user access this bookmark
- Buttons: `Bookmark this SQL query`

```
CREATE TABLE parttime_student_phone(
    part_st_id CHAR(7) NOT NULL,
    phone_num VARCHAR(20) NOT NULL,
    PRIMARY KEY (part_st_id,phone_num),
    FOREIGN KEY (part_st_id)
    REFERENCES parttime_student(st_id));
```

The screenshot shows the phpMyAdmin interface for a MySQL database named 'university'. The left sidebar lists databases and tables:

- db
- hangman\_game
- information\_schema
- mysql
- performance\_schema
- phpmyadmin
- test
- university
  - New
  - course
  - fulltime\_student
  - fulltime\_student\_phone
  - parttime\_student
  - parttime\_student\_phone
  - payment

The right panel shows the 'parttime\_student\_phone' table structure. A message at the top indicates an empty result set. Below it is the SQL query:

```
SELECT * FROM `parttime_student_phone`
```

Below the query are options for 'Query results operations' (Create view) and 'Bookmark this SQL query' (Label: [ ]). A 'Console' tab is visible at the bottom.

```
CREATE TABLE fulltime_student_email(
    full_st_id CHAR(7) NOT NULL,
    email VARCHAR(200) NOT NULL,
    PRIMARY KEY (full_st_id,email),
    FOREIGN KEY (full_st_id)
    REFERENCES fulltime_student(st_id));
```

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0007 seconds.)

```
SELECT * FROM `fulltime_student_email`
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

full\_st\_id email

Query results operations

Create view

Bookmark this SQL query

Label:   Let every user access this bookmark

Bookmark this SQL query

Console

```
CREATE TABLE parttime_student_email(
    part_st_id CHAR(7) NOT NULL,
    email VARCHAR(200) NOT NULL,
    PRIMARY KEY (part_st_id,email),
    FOREIGN KEY (part_st_id)
    REFERENCES parttime_student(st_id));
```

The screenshot shows the phpMyAdmin interface for a MySQL database named 'university'. The left sidebar lists databases and tables:

- db
- hangman\_game
- information\_schema
- mysql
- performance\_schema
- phpmyadmin
- test
- university
  - New
  - course
  - fulltime\_student
  - fulltime\_student\_email
  - fulltime\_student\_phone
  - parttime\_student
  - parttime\_student\_email
  - parttime\_student\_phone
  - payment

The main panel shows the 'parttime\_student\_email' table with the following details:

- Message: MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)
- SQL Query: `SELECT * FROM `parttime_student_email``
- Operations:
  - Create view
- Bookmark this SQL query:
  - Label:
  - Let every user access this bookmark
  - Bookmark this SQL query

```
CREATE TABLE enrolment_fulltime(
    course_code CHAR(7) NOT NULL,
    payment_id CHAR(5) NOT NULL,
    full_st_id CHAR(7),
    enrolled_date DATE NOT NULL,
    PRIMARY KEY (course_code,payment_id,full_st_id,enrolled_date),
    FOREIGN KEY (course_code)
```

```

REFERENCES course(course_code),
FOREIGN KEY (payment_id)

REFERENCES payment(payment_id),
FOREIGN KEY (full_st_id)

REFERENCES fulltime_student(st_id));

```

The screenshot shows the phpMyAdmin interface with the following details:

- Left Sidebar (Database Structure):** Shows the database tree. Under the 'university' database, the 'enrolment\_fulltime' table is selected.
- Center Panel (Query Result):**
  - A green message box indicates: "MySQL returned an empty result set (i.e. zero rows). (Query took 0.0006 seconds.)"
  - The SQL query executed is: `SELECT * FROM `enrolment_fulltime``.
  - The results table has columns: course\_code, payment\_id, full\_st\_id, enrolled\_date.
  - Below the results table are "Query results operations" and "Bookmark this SQL query" buttons.
- Bottom Panel (Console):** A small "Console" tab is visible at the bottom.

```

CREATE TABLE enrolment_parttime(
course_code CHAR(7) NOT NULL,
payment_id CHAR(5) NOT NULL,
part_st_id CHAR(7),

```

```

enrolled_date DATE NOT NULL,
PRIMARY KEY (course_code,payment_id,part_st_id,enrolled_date),
FOREIGN KEY (course_code)
REFERENCES course(course_code),
FOREIGN KEY (payment_id)
REFERENCES payment(payment_id),
FOREIGN KEY (part_st_id)
REFERENCES parttime_student(st_id));

```

The screenshot shows the phpMyAdmin interface for the 'university' database. The left sidebar lists various databases and tables. The 'enrolment\_parttime' table is selected in the main query editor area. The SQL query shown is:

```
SELECT * FROM `enrolment_parttime`
```

The results pane indicates that MySQL returned an empty result set (0.0016 seconds). Below the query, there are buttons for Profiling, Edit inline, Edit, Explain SQL, Create PHP code, and Refresh. The table structure is displayed with columns: course\_code, payment\_id, part\_st\_id, and enrolled\_date. A 'Query results operations' section includes a 'Create view' button. A 'Bookmark this SQL query' section allows for labeling the bookmark and letting every user access it.

```

CREATE TABLE module(
    module_code CHAR(6) NOT NULL,
    name VARCHAR(60) NOT NULL,
    credits INT(3) NOT NULL,
    semester VARCHAR(15) NOT NULL,
    PRIMARY KEY (module_code));

```

The screenshot shows the phpMyAdmin interface on a web browser. The left sidebar lists databases and tables under the 'university' database. The main panel shows the creation of a table named 'module'. A green message box indicates that the query was successful and took 0.0018 seconds. Below the message is the SQL query: 'SELECT \* FROM `module`'. There are buttons for Profiling, Edit inline, Edit, Explain SQL, Create PHP code, and Refresh. Below the query is a table structure with columns: module\_code, name, credits, and semester. A 'Query results operations' section contains 'Create view' and 'Bookmark this SQL query' buttons. The 'Label' field is empty, and there is a checkbox for 'Let every user access this bookmark'. At the bottom right is a 'Bookmark this SQL query' button.

```

CREATE TABLE lecturer(

```

```

staff_id CHAR(7) NOT NULL,
first_name VARCHAR(20) NOT NULL,
middle_name VARCHAR(20),
sur_name VARCHAR(50) NOT NULL,
juniorLecturerFlag BINARY NOT NULL,
seniorLecturerFlag BINARY NOT NULL,
moduleLeaderFlag BINARY NOT NULL,
mentor_id CHAR(7),
PRIMARY KEY (staff_id),
FOREIGN KEY (mentor_id)
REFERENCES lecturer(staff_id);

```

```

CREATE TABLE teaching_fulltime(
module_code CHAR(6) NOT NULL,
staff_id CHAR(7) NOT NULL,
full_st_id CHAR(7),
PRIMARY KEY (module_code, staff_id, full_st_id),
FOREIGN KEY (module_code)
REFERENCES module(module_code),

```

```

FOREIGN KEY (staff_id)
REFERENCES lecturer(staff_id),
FOREIGN KEY (full_st_id)
REFERENCES fulltime_student(st_id));

```

The screenshot shows the phpMyAdmin interface with the following details:

- Left Panel (Database Structure):** Shows the database structure with the 'university' database selected. Under 'university', the following tables are listed: hangman\_game, information\_schema, mysql, performance\_schema, phpmyadmin, test, university, New, course, course\_lecturer, course\_module, enrolment\_fulltime, enrolment\_parttime, fulltime\_student, fulltime\_student\_email, fulltime\_student\_phone, lecturer, lecturer\_email, lecturer\_phone, module, parttime\_student, parttime\_student\_email, parttime\_student\_phone, payment, sport, student\_sport, and teaching\_fulltime.
- Top Bar:** Shows the URL as localhost / 127.0.0.1 / university / and the title localhost/phpmyadmin/in...
- Central Area:**
  - Message Bar:** MySQL returned an empty result set (i.e. zero rows). (Query took 0.0013 seconds.)
  - SQL Query:** SELECT \* FROM `teaching\_fulltime`
  - Operations:** Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]
  - Table Structure:** module\_code, staff\_id, full\_st\_id
  - Query Results Operations:** Create view
  - Bookmarking:** Bookmark this SQL query
    - Label:
    - Let every user access this bookmark
    - Bookmark this SQL query
- Bottom Bar:** Console

```

CREATE TABLE teaching_parttime(
    module_code CHAR(6) NOT NULL,
    staff_id CHAR(7) NOT NULL,
    part_st_id CHAR(7),
    PRIMARY KEY (module_code,staff_id,part_st_id),
)

```

```
FOREIGN KEY (module_code)
REFERENCES module(module_code),
FOREIGN KEY (staff_id)
REFERENCES lecturer(staff_id),
FOREIGN KEY (part_st_id)
REFERENCES parttime_student(st_id));
```

The screenshot shows the phpMyAdmin interface for the 'university' database. The left sidebar lists various tables under the 'university' schema. The right panel displays the 'teaching\_parttime' table with the following structure:

module_code	staff_id	part_st_id
-------------	----------	------------

A message at the top indicates that MySQL returned an empty result set. Below the table, there are 'Query results operations' and 'Bookmark this SQL query' buttons.

```
CREATE TABLE sport(  
    sport_id CHAR(4) NOT NULL,  
    sport_name VARCHAR(20) NOT NULL,  
    PRIMARY KEY (sport_id));
```

The screenshot shows the phpMyAdmin interface for MySQL. On the left, the database structure is displayed with the 'university' database selected. Inside 'university', there are several tables: course, enrolment, fulltime\_student, fulltime\_student\_email, fulltime\_student\_phone, lecturer, module, parttime\_student, parttime\_student\_email, parttime\_student\_phone, payment, sport, and teaching. The 'sport' table is currently selected. The main panel shows the SQL query: 'SELECT \* FROM `sport`'. A green message box indicates: 'MySQL returned an empty result set (i.e. zero rows). (Query took 0.0016 seconds.)'. Below the query, there are buttons for Profiling, Edit inline, Edit, Explain SQL, Create PHP code, and Refresh. The results section is empty. At the bottom, there are options to Create view, Bookmark this SQL query (with a Label input field and a checkbox for Let every user access this bookmark), and a 'Bookmark this SQL query' button.

```
CREATE TABLE student_sport(
```

```

full_st_id CHAR(7),
sport_id CHAR(4) NOT NULL,
PRIMARY KEY (full_st_id,sport_id),
FOREIGN KEY (full_st_id)
REFERENCES fulltime_student(st_id),
FOREIGN KEY (sport_id)
REFERENCES sport(sport_id));

```

The screenshot shows the phpMyAdmin interface for a MySQL database named 'university'. The left sidebar lists various databases and tables, including 'student\_sport' which is currently selected. The main panel displays the results of a SQL query: 'SELECT \* FROM `student\_sport`'. The results area shows a single row with three columns: 'full\_st\_id', 'part\_st\_id', and 'sport\_id'. Below the results, there are options for 'Query results operations' like 'Create view' and 'Bookmark this SQL query'. A success message at the top indicates that MySQL returned an empty result set.

```
CREATE TABLE course_lecturer(
```

```

course_code CHAR(7) NOT NULL,
staff_id CHAR(7) NOT NULL,
PRIMARY KEY (course_code,staff_id),
FOREIGN KEY (course_code)
REFERENCES course(course_code),
FOREIGN KEY (staff_id)
REFERENCES lecturer(staff_id);

REFERENCES lecturer(staff_id));

```

The screenshot shows the phpMyAdmin interface with the following details:

- Server:** 127.0.0.1
- Database:** university
- Table:** student\_sport
- Query Result:** MySQL returned an empty result set (i.e. zero rows). (Query took 0.0014 seconds.)
- SQL Query:** SELECT \* FROM `student\_sport`
- Operations:**
  - Profiling
  - [Edit inline]
  - [Edit]
  - [Explain SQL]
  - [Create PHP code]
  - [Refresh]
- Results:** full\_st\_id | sport\_id
- Query results operations:**
  - Create view
- Bookmark this SQL query:**
  - Label:
  - Let every user access this bookmark
  - Bookmark this SQL query

```
CREATE TABLE course_module(
```

```

course_code CHAR(7) NOT NULL,
module_code CHAR(6) NOT NULL,
PRIMARY KEY (course_code,module_code),
FOREIGN KEY (course_code)
REFERENCES course(course_code),
FOREIGN KEY (module_code)
REFERENCES module(module_code));

```

The screenshot shows the phpMyAdmin interface on a web browser. The left sidebar displays a tree view of databases and tables, including 'db', 'hangman\_game', 'information\_schema', 'mysql', 'performance\_schema', 'phpmyadmin', 'test', 'university', 'course', 'course\_lecturer', 'course\_module', 'enrolment', 'fulltime\_student', 'fulltime\_student\_email', 'fulltime\_student\_phone', 'lecturer', 'module', 'parttime\_student', 'parttime\_student\_email', 'parttime\_student\_phone', 'payment', 'sport', 'student\_sport', and 'teaching'. The 'course\_module' table is selected.

The main panel shows the SQL query:

```

SELECT * FROM `course_module`

```

The results pane displays a green message: "MySQL returned an empty result set (i.e. zero rows). (Query took 0.0006 seconds.)". Below the message, there are several options: Profiling, Edit inline, Edit, Explain SQL, Create PHP code, and Refresh. There are also buttons for Create view, Bookmark this SQL query, and a Label input field with a checkbox for Let every user access this bookmark. A "Bookmark this SQL query" button is located at the bottom right of the results pane.

```

CREATE TABLE lecturer_phone(
staff_id CHAR(7) NOT NULL,

```

```

phone_num VARCHAR(20) NOT NULL,
PRIMARY KEY (staff_id,phone_num),
FOREIGN KEY (staff_id)
REFERENCES lecturer(staff_id));

```

The screenshot shows the phpMyAdmin interface with the following details:

- Left Panel (Database Structure):** Shows the database structure with the 'university' database selected. Under 'university', the 'lecturer\_phone' table is highlighted.
- Top Bar:** Shows the URL as `localhost / 127.0.0.1 / university /` and the title bar includes the phpMyAdmin logo and the current page title 'localhost/phpmyadmin/in...'. There are tabs for 'Recent' and 'Favorites'.
- Right Panel (Query Results):**
  - A green message box at the top says: 'MySQL returned an empty result set (i.e. zero rows). (Query took 0.0007 seconds.)'
  - The SQL query entered is: `SELECT * FROM `lecturer_phone``.
  - Below the query, there are several options: Profiling, Edit inline, Edit, Explain SQL, Create PHP code, and Refresh.
  - The results table has columns: staff\_id and phone\_num.
  - Below the table, under 'Query results operations', there is a 'Create view' button.
  - Under 'Bookmark this SQL query', there is a 'Label:' input field, a checkbox for 'Let every user access this bookmark', and a 'Bookmark this SQL query' button.
  - At the bottom right of the panel, there is a small icon.

```

CREATE TABLE lecturer_email(
staff_id CHAR(7) NOT NULL,
email VARCHAR(200) NOT NULL,
PRIMARY KEY (staff_id,email),
FOREIGN KEY (staff_id)

```

```
REFERENCES lecturer(staff_id));
```

The screenshot shows the phpMyAdmin interface connected to a MySQL server at 127.0.0.1. The database selected is 'university'. On the left, the database structure is displayed with various tables under the 'university' schema. The 'lecturer\_email' table is currently selected. In the main panel, a green message box indicates that the query 'SELECT \* FROM `lecturer\_email`' returned an empty result set (zero rows). Below the message, the SQL query is shown again, along with several action buttons: Profiling, Edit inline, Edit, Explain SQL, Create PHP code, and Refresh. A results operations section is visible, containing options like Create view and Bookmark this SQL query, with a 'Label:' input field and a 'Let every user access this bookmark' checkbox.

## Insert data into tables

```
INSERT INTO course
```

```
VALUES('1248918','Artificial Intelligence'),  
      ('1257231','Computer Science'),  
      ('4628951','Software Engineering'),  
      ('5924321','Business Intelligence'),  
      ('6423521','Business Management');
```

The screenshot shows the phpMyAdmin interface for the 'university' database. The left sidebar lists databases and tables. The 'course' table under the 'university' database is selected. The main area displays the results of the SQL query: 'SELECT \* FROM `course`'. The results show five rows of data:

	course_code	course_name
<input type="checkbox"/>	1248918	Artificial Intelligence
<input type="checkbox"/>	1257231	Computer Science
<input type="checkbox"/>	4628951	Software Engineering
<input type="checkbox"/>	5924321	Business Intelligence
<input type="checkbox"/>	6423521	Business Management

Below the table, there are options to 'Check all', 'With selected:', 'Edit', 'Copy', 'Delete', and 'Export'. The bottom section contains buttons for 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'.

INSERT INTO payment

VALUES('24652',75000),

('25272',75000),

('49972',75000),

('35272',150000),

('85422',89000),

('24789',85000),

('29272',100000),

```
('38272',125000),
('50972',75000),
('84312',156000);
```

The screenshot shows the phpMyAdmin interface for the 'university' database. The left sidebar lists databases and tables. The right panel displays the 'payment' table with 10 rows of data.

	payment_id	amount
<input type="checkbox"/>	24652	75000
<input type="checkbox"/>	24789	85000
<input type="checkbox"/>	25272	75000
<input type="checkbox"/>	29272	100000
<input type="checkbox"/>	35272	150000
<input type="checkbox"/>	38272	125000
<input type="checkbox"/>	49972	75000
<input type="checkbox"/>	50972	75000
<input type="checkbox"/>	84312	156000
<input type="checkbox"/>	85422	89000

```
INSERT INTO fulltime_student
```

```
VALUES('2122096','Fathima','Rashadha','Rimsan','No 37/23, Panchananda road, Kankamgoda, Beruwala','Female','2004-05-03'),
('2122097','Fathima','Nazeefa','Anees','No 34/34, Peries road Colombo 6','Female','2004-03-04'),
('2122098','Sanjula','Maneth','Subhawickrama','No 9, Main street, Colombo 10','Male','2001-09-09'),
('2122099','Mohamed','Rikzy','Jesuli','No 9, Peta street, Colombo 6','Male','2000-09-08'),
```

('2122100','Shivani','Abhishya','Monalingam','No 5, Pery road, Colombo 10','Female','2005-09-04');

The screenshot shows the phpMyAdmin interface for the 'university' database. The 'fulltime\_student' table is selected. The table structure includes columns: st\_id, first\_name, middle\_name, sur\_name, address, gender, and date\_of\_birth. The data is as follows:

st_id	first_name	middle_name	sur_name	address	gender	date_of_birth
2122096	Fathima	Rashadha	Rimsan	No 37/23, Panchanada road, Kankanaigoda, Beruwala	Female	2004-05-03
2122097	Fathima	Nazeefa	Anees	No 34/24, Peries road Colombo 6	Female	2004-03-04
2122098	Sanjula	Maneth	Subhawickrama	No 9, Main street, Colombo 10	Male	2001-09-09
2122099	Mohamed	Rikzy	Jesuli	No 9, Peta street, Colombo 6	Male	2000-09-08
2122100	Shivani	Abhishya	Monalingam	No 5, Pery road, Colombo 10	Female	2005-09-04

INSERT INTO parttime\_student

VALUES('2122086','Sunera','Udama','Wanninayake','No 9, Marry street, Colombo 6','Male','2000-09-07','Sales Manager'),

('2122082','Sonali','Sayumi','Pathiranage','No 67, Riya road, Colombo 10','Female','1998-09-09','Civil Engineer'),

('2122083','Fathima','Amanie','Yusuf','No 56/4, Main street, Colombo 10','Female','1990-06-09','Mechanical Engineer'),

('2122084','Sachin','Hansaka','Mahipala','No 9, Koppa road, Colombo 6','Male','1999-07-09','Technician'),

('2122085','Fathima','Zuha','Nufail','No 15, Sheik road, Kalutara','Female','2000-09-05','Phisical Technician');

The screenshot shows the phpMyAdmin interface for the 'university' database. The left sidebar lists various databases and tables. The main area displays the 'parttime\_student' table with the following data:

st_id	first_name	middle_name	sur_name	address	gender	date_of_birth	occupation
2122082	Sonali	Sayumi	Pathirange	No 67, Riya road, Colombo 10	Female	1998-09-09	Civil Engineer
2122083	Fathima	Amanie	Yusuf	No 56/4, Main street, Colombo 10	Female	1990-06-09	Mechanical Engineer
2122084	Sachin	Hansaka	Mahipala	No 9, Koppa road, Colombo 6	Male	1999-07-09	Technician
2122085	Fathima	Zuhra	Nufail	No 15, Sheik road, Kalutara	Female	2000-09-05	Physical Technician
2122096	Sunera	Udana	Wanninayake	No 9, Marry street, Colombo 6	Male	2000-09-07	Sales Manager

```

INSERT INTO fulltime_student_phone
VALUES('2122096','0094716085574'),
      ('2122097','0094769026607'),
      ('2122096','0094729017704'),
      ('2122098','0094715029900'),
      ('2122099','0094769087754'),
      ('2122100','0094768907456');
    
```

The screenshot shows the phpMyAdmin interface connected to a MySQL database named 'university'. The left sidebar displays a tree view of the database schema, including tables like 'fulltime\_student', 'course', and 'module'. The right panel shows the results of a SQL query: 'SELECT \* FROM `fulltime\_student\_phone`'. The results are displayed in a table format with columns 'full\_st\_id' and 'phone\_num'. There are six rows of data. Below the table are various operations such as Edit, Copy, Delete, Check all, and Export. At the bottom, there are links for Print, Copy to clipboard, Export, Create view, and a bookmark option.

full_st_id	phone_num
2122096	0094716085574
2122096	0094729017704
2122097	0094769026607
2122098	0094715029900
2122099	0094769087754
2122100	0094768907456

```
INSERT INTO parttime_student_phone
VALUES('2122082','0094716085574'),
      ('2122082','0094709026607'),
      ('2122083','0094729877704'),
      ('2122084','0094715029908'),
      ('2122085','0094769000054'),
      ('2122086','0094768907006');
```

```

INSERT INTO fulltime_student_email
VALUES('2122096','2122096.rimsan.iis@ac.lk'),
('2122097','2122097.nazeefa.iis@ac.lk'),
('2122096','rimsanrashadha04@gmail.com'),
('2122098','2122098.maneth.iis@ac.lk'),
('2122099','2122099.rikzy.iis@ac.lk'),
('2122100','2122100.abhishya.iis@ac.lk');

```

```

INSERT INTO parttime_student_email
VALUES('2122082','2122082.sonali.iis@ac.lk'),
('2122083','2122083.amanie.iis@ac.lk'),
('2122082','sonaliii04@gmail.com'),
('2122084','2122084.sachin.iis@ac.lk'),
('2122085','2122085.zuha.iis@ac.lk'),
('2122086','2122086.sunera.iis@ac.lk');

```

part_st_id	email
2122082	sonali.iis@ac.lk
2122082	sonaliii04@gmail.com
2122083	amanie.iis@ac.lk
2122084	sachin.iis@ac.lk
2122085	zuha.iis@ac.lk
2122086	sunera.iis@ac.lk

```

INSERT INTO enrolment_fulltime
VALUES('1248918','24652','2122096','2022-01-01'),
('1257231','25272','2122097','2021-12-31'),
('4628951','49972','2122098','2021-12-31'),
('5924321','35272','2122099','2022-01-02'),
('6423521','85422','2122100','2022-02-01');

```

**INSERT INTO enrolment\_parttime**

```
VALUES('1248918','24789','2122082','2022-01-01'),
      ('1257231','29272','2122083','2021-12-31'),
      ('4628951','50972','2122084','2021-12-31'),
      ('5924321','38272','2122085','2022-01-02'),
      ('6423521','84312','2122086','2022-02-01');
```

**INSERT INTO module**

```
VALUES('CM1604','Database Systems',60,'1st'),
```

```
('CM1607','English Communication Skills',45,'1st'),
('CM1601','Programming Fundamentals',90,'2nd'),
('CM1602','Computational Mathematics',90,'1st'),
('CM1605','Computer Systems Fundamentals',80,'1st');
```

module_code	name	credits	semester
CM1601	Programming Fundamentals	90	2nd
CM1602	Computational Mathematics	90	1st
CM1604	Database Systems	60	1st
CM1605	Computer Systems Fundamentals	80	1st
CM1607	English Communication Skills	45	1st

INSERT INTO lecturer

```
VALUES('AI22096','Priyanka','Madhavi','Walihinda',0,1,1,null),
('AI22097','Rajitha','Perera','Jayasinghe',1,0,0,'AI22096'),
('AI22098','Janani','Sumanthika','Amadhoru',0,1,0,null),
('AI22099','Venuri','Menaka','Rajapaksha',1,0,0,null),
('AI22088','Sonali','Hansaka','Wanninayake',1,0,0,'AI22097'),
('AI22077','Menaka','Udara','Welihidage',0,1,1,null);
```

The screenshot shows the phpMyAdmin interface connected to a MySQL database named 'university'. The current table is 'lecturer'. The data grid displays five rows of lecturer information:

staff_id	first_name	middle_name	sur_name	juniorLecturerFlag	seniorLecturerFlag	moduleLeaderFlag	mentor_id
AI22077	Menaka	Udara	Wellimage	0	1	1	NULL
AI22088	Sonal	Hansaka	Waminayake	1	0	0	AI22097
AI22096	Priyanka	Madhavi	Waliminda	0	1	1	NULL
AI22097	Rajitha	Perera	Jayasinghe	1	0	0	AI22096
AI22098	Janani	Sumanthika	Amadhoru	0	1	0	NULL
AI22099	Venuri	Menaka	Rajapaksha	1	0	0	NULL

**INSERT INTO teaching\_fulltime**

```
VALUES('CM1604','AI22096','2122096'),
      ('CM1607','AI22098','2122096'),
      ('CM1604','AI22077','2122100'),
      ('CM1602','AI22088','2122097'),
      ('CM1605','AI22097','2122099');
```

The screenshot shows the phpMyAdmin interface connected to a MySQL database named 'university'. The left sidebar lists various databases and their tables. The 'teaching\_fulltime' table is selected under the 'university' database. The main area displays the results of a SELECT query: 'SELECT \* FROM `teaching\_fulltime`'. The results show five rows of data:

	module_code	staff_id	full_st_id
<input type="checkbox"/>	CM1602	AI22088	2122097
<input type="checkbox"/>	CM1604	AI22077	2122100
<input type="checkbox"/>	CM1604	AI22096	2122096
<input type="checkbox"/>	CM1605	AI22097	2122099

Below the table, there are options to 'Check all' or 'With selected' (Edit, Copy, Delete) and an 'Export' button. At the bottom, there are links for 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'.

```
INSERT INTO teaching_parttime
VALUES('CM1604','AI22096','2122082'),
      ('CM1607','AI22098','2122082'),
      ('CM1604','AI22077','2122083'),
      ('CM1602','AI22088','2122084'),
      ('CM1605','AI22097','2122085');
```

The screenshot shows the phpMyAdmin interface for the 'university' database. The left sidebar lists various schemas and tables. The main area displays the 'teaching\_parttime' table with 5 rows of data. A SQL query for selecting all columns from the table is shown above the results.

	module_code	staff_id	part_st_id
<input type="checkbox"/> Edit	CM1602	AI22088	2122084
<input type="checkbox"/> Edit	CM1604	AI22077	2122083
<input type="checkbox"/> Edit	CM1604	AI22096	2122082
<input type="checkbox"/> Edit	CM1605	AI22097	2122085
<input type="checkbox"/> Edit	CM1607	AI22098	2122082

INSERT INTO sport

```
VALUES('2244','Tennis'),  
      ('5566','Badminton'),  
      ('7744','Cricket'),  
      ('3399','Football'),  
      ('9933','Basketball');
```

The screenshot shows the phpMyAdmin interface connected to a MySQL database named 'university'. The left sidebar lists various tables under the 'university' schema, including 'course', 'course\_lecturer', 'course\_module', 'enrolment\_fulltime', 'enrolment\_parttime', 'fulltime\_student', 'fulltime\_student\_email', 'fulltime\_student\_phone', 'lecturer', 'lecturer\_email', 'lecturer\_phone', 'module', 'parttime\_student', 'parttime\_student\_email', 'parttime\_student\_phone', 'payment', 'sport', 'student\_sport', 'teaching\_fulltime', and 'teaching\_parttime'. The 'sport' table is currently selected.

The main panel displays the contents of the 'sport' table. A green status bar at the top indicates: 'Showing rows 0 - 4 (5 total, Query took 0.0005 seconds.)'. Below this, a SQL query is shown: 'SELECT \* FROM `sport`'. There are buttons for Profiling, Edit inline, Edit, Explain SQL, Create PHP code, and Refresh. A dropdown menu shows 'Show all' and 'Number of rows: 25'. The table itself has columns 'sport\_id' and 'sport\_name'. Five rows are listed:

	sport_id	sport_name
<input type="checkbox"/>	2244	Tennis
<input type="checkbox"/>	3399	Football
<input type="checkbox"/>	5566	Badminton
<input type="checkbox"/>	7744	Cricket
<input type="checkbox"/>	9933	Basketball

Below the table are buttons for Check all, With selected: (Edit, Copy, Delete), Export, and another 'Export' button. A 'Query results operations' section includes Print, Copy to clipboard, Export, Display chart, and Create view. A 'Bookmark this SQL query' section allows saving the current query to a bookmark. At the bottom, there is a 'Console' input field and a checkbox for 'Let every user access this bookmark'.

```
INSERT INTO student_sport
VALUES('2122096','2244'),
('2122097','5566'),
('2122098','2244'),
('2122099','7744'),
('2122100','9933');
```

The screenshot shows the phpMyAdmin interface connected to a MySQL database named 'university'. The left sidebar lists various tables under the 'university' schema. The 'student\_sport' table is currently selected and displayed in the main pane. A green status bar at the top indicates 'Showing rows 0 - 4 (5 total, Query took 0.0007 seconds.)'. Below it, the SQL query 'SELECT \* FROM `student\_sport`' is shown. The data grid displays five rows of student-sport associations:

	full_st_id	sport_id
<input type="checkbox"/> <a href="#">Edit</a> <a href="#">Copy</a> <a href="#">Delete</a>	2122096	2244
<input type="checkbox"/> <a href="#">Edit</a> <a href="#">Copy</a> <a href="#">Delete</a>	2122097	5566
<input type="checkbox"/> <a href="#">Edit</a> <a href="#">Copy</a> <a href="#">Delete</a>	2122098	2244
<input type="checkbox"/> <a href="#">Edit</a> <a href="#">Copy</a> <a href="#">Delete</a>	2122099	7744
<input type="checkbox"/> <a href="#">Edit</a> <a href="#">Copy</a> <a href="#">Delete</a>	2122100	9933

Below the data grid are buttons for 'Check all', 'With selected:', 'Edit', 'Copy', and 'Delete'. An 'Export' button is also present. At the bottom of the page, there are links for 'Print', 'Copy to clipboard', 'Export', 'Display chart', 'Create view', and a 'Bookmark this SQL query' button.

```
INSERT INTO course_lecturer  
VALUES('1248918','AI22096'),  
      ('1257231','AI22077'),  
      ('4628951','AI22098'),  
      ('5924321','AI22097'),  
      ('6423521','AI22099');
```

The screenshot shows the phpMyAdmin interface for the 'university' database. The left sidebar lists various schemas and tables. The 'course\_lecturer' table is selected in the 'university' schema. The main area displays the results of a SELECT query: 'Showing rows 0 - 4 (5 total, Query took 0.0007 seconds.)'. The query is 'SELECT \* FROM `course\_lecturer`'. The results are shown in a grid:

	course_code	staff_id
<input type="checkbox"/>	1248918	AI22096
<input type="checkbox"/>	1257231	AI22077
<input type="checkbox"/>	4628951	AI22098
<input type="checkbox"/>	5924321	AI22097
<input type="checkbox"/>	6423521	AI22099

Below the grid are options to 'Check all', 'With selected:', 'Edit', 'Copy', and 'Delete'. There are also links for 'Export', 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'. At the bottom, there is a 'Bookmark this SQL query' button and a 'Console' tab.

```
INSERT INTO course_module  
VALUES('1248918','CM1601'),  
      ('4628951','CM1601'),  
      ('1248918','CM1604'),  
      ('1257231','CM1605'),  
      ('6423521','CM1607');
```

The screenshot shows the phpMyAdmin interface connected to a MySQL database named 'university'. The left sidebar lists various databases and their tables. The 'course\_module' table under the 'university' database is selected. The main panel displays the results of a SELECT query: 'Showing rows 0 - 4 (5 total, Query took 0.0007 seconds.)'. The results are as follows:

	course_code	module_code
<input type="checkbox"/>	1248918	CM1601
<input type="checkbox"/>	1248918	CM1604
<input type="checkbox"/>	1257231	CM1605
<input type="checkbox"/>	4628951	CM1601
<input type="checkbox"/>	6423521	CM1607

Below the table, there are buttons for 'Check all', 'With selected:', 'Edit', 'Copy', and 'Delete'. The 'Query results operations' section includes 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'. A 'Bookmark this SQL query' button is also present.

```
INSERT INTO lecturer_phone  
VALUES('AI22096','0094769026604'),  
('AI22097','0094769012345'),  
('AI22098','0094769023456'),  
('AI22099','0094769009876'),  
('AI22088','0094769035789'),  
('AI22077','0094769063127');
```

The screenshot shows the phpMyAdmin interface connected to a MySQL database named 'university'. The left sidebar lists various databases and tables. The 'lecturer\_phone' table is selected in the 'university' database. The main panel displays the results of a SELECT query: 'Showing rows 0 - 5 (6 total, Query took 0.0006 seconds.)'. The results are as follows:

	staff_id	phone_num
<input type="checkbox"/>	AI22077	0094769063127
<input type="checkbox"/>	AI22088	0094769035789
<input type="checkbox"/>	AI22096	0094769026604
<input type="checkbox"/>	AI22097	0094769012345
<input type="checkbox"/>	AI22098	0094769023456
<input type="checkbox"/>	AI22099	0094769009876

Below the table, there are options to 'Check all', 'With selected:', and 'Delete'. The bottom section contains buttons for 'Print', 'Copy to clipboard', 'Export', 'Display chart', 'Create view', and 'Bookmark this SQL query'.

```
INSERT INTO lecturer_email
VALUES('AI22096','madhavi.r@iis.ac.lk'),
      ('AI22097','rajitha.p@iis.ac.lk'),
      ('AI22098','janani.o@iis.ac.lk'),
      ('AI22099','venuri.s@iis.ac.lk'),
      ('AI22088','sonal.w@iis.ac.lk'),
      ('AI22097','rajitha6789@gmail.com'),
```

('AI22077','menaka.m@iis.ac.lk');

The screenshot shows the phpMyAdmin interface for the 'university' database. The left sidebar lists various schemas and tables. The 'lecturer\_email' table is selected in the 'university' schema. The main area displays the results of the SQL query: 'SELECT \* FROM `lecturer\_email`'. The results are shown in a table with columns 'staff\_id' and 'email'. There are 7 total rows.

staff_id	email
AI22077	menaka.m@iis.ac.lk
AI22088	sonal.w@iis.ac.lk
AI22096	madhavi.r@iis.ac.lk
AI22097	rajitha.p@iis.ac.lk
AI22097	rajitha6789@gmail.com
AI22098	janani.o@iis.ac.lk
AI22099	venuri.s@iis.ac.lk

6) Perform below given questions with SQL codes and their output (code and output screenshots should be provided.)

I. Write select query to find out occupation of each part-time student - 5 Marks

```
SELECT st_id,first_name,middle_name,sur_name,occupation  
FROM parttime_student;
```

The screenshot shows the phpMyAdmin interface for the 'university' database. The left sidebar lists various tables, including 'information\_schema', 'mysql', 'performance\_schema', 'phpmyadmin', 'test', and 'university'. Under 'university', there are tables like 'New', 'course', 'course\_lecturer', 'course\_module', 'enrolment\_fulltime', 'enrolment\_parttime', 'fulltime\_student', 'fulltime\_student\_email', 'fulltime\_student\_phone', 'lecturer', 'lecturer\_email', 'lecturer\_phone', 'module', 'parttime\_student', 'parttime\_student\_email', 'parttime\_student\_phone', 'payment', 'sport', 'student\_sport', 'teaching\_fulltime', and 'teaching\_parttime'. The main area displays the 'parttime\_student' table with the following data:

	st_id	first_name	middle_name	sur_name	occupation
<input type="checkbox"/>	212208	Sonali	Sayumi	Pethiranage	Civil Engineer
<input type="checkbox"/>	2122083	Fathima	Amanie	Yusuf	Mechanical Engineer
<input type="checkbox"/>	212208	Sachin	Hansaka	Mahipala	Technician
<input type="checkbox"/>	2122085	Fathima	Zuhra	Nufail	Physical Technician
<input type="checkbox"/>	2122086	Sunera	Udana	Wanninayake	Sales Manager

Below the table, there are buttons for 'Check all', 'With selected', 'Edit', 'Copy', 'Delete', and 'Export'. At the bottom, there are additional buttons for 'Print', 'Copy to clipboard', 'Export', 'Display chart', 'Create view', and 'Bookmark this SQL query'.

II. Write a select query to find out the module which is having maximum credit amount and minimum credit amount- 5 Marks

```
SELECT name,credits
```

FROM module

WHERE credits = (SELECT MAX(credits)

FROM module) or credits = (SELECT MIN(credits) FROM module);

The screenshot shows the phpMyAdmin interface for the 'university' database. The current table is 'module'. The SQL query executed was:

```
SELECT name, credits FROM module WHERE credits = (SELECT MAX(credits) FROM module) OR credits = (SELECT MIN(credits) FROM module);
```

The results show three rows:

	name	credits
<input type="checkbox"/>	Programming Fundamentals	90
<input type="checkbox"/>	Computational Mathematics	90
<input type="checkbox"/>	English Communication Skills	45

Below the table, there are operations like Print, Copy to clipboard, Export, Display chart, and Create view.

At the bottom, there is a 'Bookmark this SQL query' section with a 'Label:' input field and a checkbox for 'Let every user access this bookmark'.

III. Write a SQL for left outer join and right outer join for module and lecturer table. 2.5 marks for each query - Total 5 Marks

I can't implement left or right outer joiner for above mentioned tables because I have taken a ternary relationship among Lecturer, Module, and Student, therefore, there is no any fk between module and lecturer tables.

So I will implement it as follow;

```
SELECT module_code, staff_id  
FROM teaching_fulltime;
```

The screenshot shows the phpMyAdmin interface for the 'university' database. The current table is 'teaching\_fulltime'. The SQL query in the top left is:

```
SELECT module_code, staff_id FROM teaching_fulltime;
```

The table data is as follows:

	module_code	staff_id
<input type="checkbox"/>	CM1602	AI22088
<input type="checkbox"/>	CM1604	AI22077
<input type="checkbox"/>	CM1604	AI22096
<input type="checkbox"/>	CM1605	AI22097
<input type="checkbox"/>	CM1607	AI22098

Below the table, there are buttons for 'Check all', 'With selected:', 'Edit', 'Copy', 'Delete', and 'Export'. There are also 'Show all' and 'Number of rows' dropdowns set to 25.

The 'Query results operations' section includes buttons for 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'.

The 'Bookmark this SQL query' section allows labeling the bookmark and choosing 'Let every user access this bookmark'.

A 'Console' button is located at the bottom left.

```
SELECT module_code, staff_id
```

```
FROM teaching_parttime;
```

The screenshot shows the phpMyAdmin interface for the 'university' database. The current table is 'teaching\_parttime'. A SQL query is displayed at the top:

```
SELECT module_code, staff_id FROM teaching_parttime;
```

The results show the following data:

	module_code	staff_id
<input type="checkbox"/>	CM1602	AI22088
<input type="checkbox"/>	CM1604	AI22077
<input type="checkbox"/>	CM1604	AI22096
<input type="checkbox"/>	CM1605	AI22097
<input type="checkbox"/>	CM1607	AI22098

Below the table, there are buttons for 'Check all', 'With selected:', 'Edit', 'Copy', 'Delete', and 'Export'. There are also two sets of 'Show all' and 'Number of rows:' dropdowns.

The 'Query results operations' section includes links for 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'.

The 'Bookmark this SQL query' section allows users to enter a 'Label' and a checkbox for 'Let every user access this bookmark'. A 'Bookmark this SQL query' button is also present.

At the bottom left, there is a 'Console' button.

```
SELECT staff_id,module_code
```

```
FROM teaching_parttime;
```

The screenshot shows the phpMyAdmin interface for the 'university' database. The current table is 'teaching\_parttime'. A SQL query is displayed in the top left:

```
SELECT staff_id,module_code FROM teaching_parttime;
```

The results table shows the following data:

	staff_id	module_code
<input type="checkbox"/>	AI22088	CM1602
<input type="checkbox"/>	AI22077	CM1604
<input type="checkbox"/>	AI22096	CM1604
<input type="checkbox"/>	AI22097	CM1605
<input type="checkbox"/>	AI22098	CM1607

Below the table are several action buttons: Check all, With selected:, Edit, Copy, Delete, and Export.

At the bottom of the interface, there are sections for 'Query results operations' (Print, Copy to clipboard, Export, Display chart, Create view) and 'Bookmark this SQL query' (Label input field, Let every user access this bookmark, Bookmark this SQL query button).

```
SELECT staff_id,module_code  
FROM teaching_fulltime;
```

The screenshot shows the phpMyAdmin interface for the 'university' database. The current table is 'teaching\_fulltime'. A query has been run:

```
SELECT staff_id, module_code FROM teaching_fulltime;
```

The results show the following data:

	staff_id	module_code
<input type="checkbox"/>	AI22088	CM1602
<input type="checkbox"/>	AI22077	CM1604
<input type="checkbox"/>	AI22096	CM1604
<input type="checkbox"/>	AI22097	CM1605
<input type="checkbox"/>	AI22098	CM1607

Below the table, there are buttons for 'Check all', 'With selected:', 'Edit', 'Copy', 'Delete', and 'Export'. There are also buttons for 'Show all' and 'Number of rows: 25'. In the 'Query results operations' section, there are buttons for 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'. A 'Bookmark this SQL query' button is also present.

V. Find out which student makes which payment for which course and make it in to ascending order by payment amount - 3 marks

```
SELECT
enrolment_fulltime.course_code,enrolment_fulltime.payment_id,enrolment_fulltime.full_st_id,pay
ment.amount
FROM enrolment_fulltime
RIGHT JOIN payment
ON payment.payment_id = enrolment_fulltime.payment_id
ORDER BY payment.amount;
```

The screenshot shows the phpMyAdmin interface with the following details:

- Browser Headers:** localhost / 127.0.0.1 / university / CM1603 CW Specification.pdf
- Server:** 127.0.0.1
- Database:** university
- Table:** enrolment\_fulltime
- Query Result Message:** Showing rows 0 - 9 (10 total, Query took 0.0040 seconds.) [amount: 75000... - 156000...]
- SQL Query:**

```
SELECT
    enrolment_fulltime.course_code, enrolment_fulltime.payment_id, enrolment_fulltime.full_st_id, payment
    .amount
   FROM enrolment_fulltime
    RIGHT JOIN payment
      ON payment.payment_id =
    enrolment_fulltime.payment_id
  ORDER BY payment.amount;
```
- Buttons:** Profiling, Edit inline, Edit, Explain SQL, Create PHP code, Refresh
- Table Data:** A grid showing course codes, payment IDs, student IDs, and amounts.
- Operations:** Print, Copy to clipboard, Export, Display chart, Create view

```
SELECT
    enrolment_parttime.course_code, enrolment_parttime.payment_id, enrolment_parttime.part_st_id,
    payment.amount
   FROM enrolment_parttime
    RIGHT JOIN payment
      ON payment.payment_id = enrolment_parttime.payment_id
  ORDER BY payment.amount;
```

The screenshot shows a browser window with two tabs: 'localhost / 127.0.0.1 / university' and 'CM1603 CW Specification.pdf'. The main content is the phpMyAdmin interface for the 'university' database, specifically the 'enrolment\_fulltime' table. A green message bar at the top says: 'Showing rows 0 - 9 (10 total, Query took 0.0430 seconds.) [amount: 75000... - 156000...]'.

The SQL query executed is:

```
SELECT enrolment_parttime.course_code, enrolment_parttime.payment_id, enrolment_parttime.part_st_id, payment.amount FROM enrolment_parttime RIGHT JOIN payment ON payment.payment_id = enrolment_parttime.payment_id ORDER BY payment.amount;
```

Below the query, there are several action buttons: Profiling, Edit inline, Edit, Explain SQL, Create PHP code, and Refresh. A dropdown menu shows 'Show all' and 'Number of rows: 25'. The results table has columns: course\_code, payment\_id, part\_st\_id, and amount. The data is as follows:

course_code	payment_id	part_st_id	amount
NULL	NULL	NULL	75000
NULL	NULL	NULL	75000
4628951	50972	2122084	75000
NULL	NULL	NULL	75000
1248918	24789	2122082	85000
NULL	NULL	NULL	89000
1257231	29272	2122083	100000
5924321	38272	2122085	125000
NULL	NULL	NULL	150000
6423521	84312	2122086	156000

Below the table are 'Show all' and 'Number of rows: 25' buttons. A 'Query results operations' section contains links for Print, Copy to clipboard, Export, Display chart, and Create view. At the bottom left is a 'Console' button.

IV. Find out how many male students and female students have been enrolled (get the count) total 2 Marks

```
SELECT COUNT(gender) AS female_count FROM fulltime_student
```

```
WHERE gender = 'Female';
```

The screenshot shows a browser window with two tabs: 'localhost / 127.0.0.1 / university' and 'CM1603 CW Specification.pdf'. The main content is the phpMyAdmin interface for the 'university' database, specifically the 'fulltime\_student' table. A message box at the top states: 'Your SQL query has been executed successfully.' Below it is the SQL query: 'SELECT COUNT(gender) AS female\_count FROM fulltime\_student WHERE gender = 'Female';'. Underneath the query, there are several operation buttons: 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'. At the bottom left, there is a 'Bookmark this SQL query' section with a 'Label:' input field and a checkbox 'Let every user access this bookmark'. A large 'Bookmark this SQL query' button is located at the bottom right.

Your SQL query has been executed successfully.

```
SELECT COUNT(gender) AS female_count FROM fulltime_student WHERE gender = 'Female';
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

+ Options

**female\_count**

3

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label:

Let every user access this bookmark

Bookmark this SQL query

Console

```
SELECT COUNT(gender) AS female_count FROM parttime_student
```

```
WHERE gender = 'Female';
```

The screenshot shows the phpMyAdmin interface for a database named 'university'. The current table is 'parttime\_student'. A message at the top states: 'Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.' Below this, a green bar indicates: 'Your SQL query has been executed successfully.' The executed SQL query is:

```
SELECT COUNT(gender) AS female_count FROM parttime_student WHERE gender = 'Female';
```

The result of the query is displayed in a table:

female_count
3

Below the table are 'Query results operations' buttons: Print, Copy to clipboard, Export, Display chart, Create view, and a 'Bookmark this SQL query' button.

At the bottom left, there is a 'Console' tab.

```
SELECT COUNT(gender) AS male_count FROM fulltime_student
```

```
WHERE gender = 'Male';
```

The screenshot shows the phpMyAdmin interface for a MySQL database named 'university'. The current table is 'fulltime\_student'. A message box indicates that the current selection does not contain a unique column, so grid edit, checkbox, Edit, Copy, and Delete features are unavailable. Below this, a green success message states that the SQL query has been executed successfully. The query itself is: `SELECT COUNT(gender) AS male_count FROM fulltime_student WHERE gender = 'Male';`. The result of the query is displayed as a single row with the label 'male\_count' and the value '2'. At the bottom, there are options for 'Query results operations' like Print, Copy to clipboard, Export, Display chart, and Create view. There is also a 'Bookmark this SQL query' section with a 'Label:' input field and a checkbox for 'Let every user access this bookmark'. A large 'Bookmark this SQL query' button is located at the bottom right.

Your SQL query has been executed successfully.

```
SELECT COUNT(gender) AS male_count FROM fulltime_student WHERE gender = 'Male';
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

+ Options

**male\_count**

2

**Query results operations**

Print Copy to clipboard Export Display chart Create view

**Bookmark this SQL query**

Label:

Let every user access this bookmark

Bookmark this SQL query

Console

```
SELECT COUNT(gender) AS male_count FROM parttime_student
```

WHERE gender = 'Male':

The screenshot shows the phpMyAdmin interface for the 'university' database. The current table is 'parttime\_student'. A message at the top states: "Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available." Below this, a green box indicates: "Your SQL query has been executed successfully." The query executed was: `SELECT COUNT(gender) AS male_count FROM parttime_student WHERE gender = 'Male';`. The result of the query is displayed as a single row with the label 'male\_count' and value '2'. Below the result, there are several operation buttons: Print, Copy to clipboard, Export, Display chart, and Create view. At the bottom, there is a 'Bookmark this SQL query' section with a 'Label:' input field and a 'Let every user access this bookmark' checkbox. A large, semi-transparent watermark with the text 'CM1603 CW Specification.pdf' is visible across the entire page.

localhost / 127.0.0.1 / university / CM1603 CW Specification.pdf

localhost/phpmyadmin/in...

Server: 127.0.0.1 » Database: university » Table: parttime\_student

Show query box

⚠ Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Your SQL query has been executed successfully.

```
SELECT COUNT(gender) AS male_count FROM parttime_student WHERE gender = 'Male';
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

+ Options

**male\_count**

2

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label:

Let every user access this bookmark

Bookmark this SQL query

Console