
SCHOOL OF ENGINEERING AND TECHNOLOGY

COURSEWORK FOR

BSC (HONS) IN COMPUTER SCIENCE
BSC (HONS) INFORMATION TECHNOLOGY
BACHELOR OF SOFTWARE ENGINEERING (HONS)
BSC (HONS) INFORMATION SYSTEMS (DATA ANALYTICS)
BSC (HONS) INFORMATION TECHNOLOGY (COMPUTER NETWORKING AND SECURITY)

YEAR 1; ACADEMIC SESSION SEPTEMBER 2023

SEG1201: DATABASE FUNDAMENTALS

Part 1 Due date: Week 9 Monday, 10am

SEG1201: DATABASE FUNDAMENTALS

final DEADLINE: 13 DECEMBER 2023, 10am

STUDENT NAMES: Wayne Kan Kah Weng, Goh Ci Yun, Ryan Ng Xu Yang, Pu Xinyi, Lam Chee Hiew

STUDENT IDS: 21099403, 22017503, 22025670, 23026610, 22035455

INSTRUCTIONS





- This final assessment contributes 50% to your final grade.
- This five-member group assignment (or minimum 3-member group) is primarily for Course Learning Outcome 2 - Implement a database design group project using appropriate tools such as Oracle SQL.

IMPORTANT

The University requires students to adhere to submission deadlines for any form of assessment. Penalties are applied in relation to unauthorized late submission of work.

Academic Honesty Acknowledgement

"We **Wayne Kan Kah Weng, Lam Chee Hiew, Ryan Ng Xu Yang, Pu Xinyi, Goh Ci Yun**, verify that this paper contains entirely our own work. We have not consulted with any outside person or materials other than what was specified (an interviewee, for example) in the assignment or the syllabus requirements. Further, we have not copied or inadvertently copied ideas, sentences, or paragraphs from another student. We realize the penalties (*refer to page 16, 5.5, Appendix 2, page 44 of the student handbook diploma and undergraduate programme*) for any kind of copying or collaboration on any assignment."

Wayne  , ..  ...  , (Student signatures/Date)

Contents

General information:	Error! Bookmark not defined.
Part 1: Enhance the chosen case scenario (10 marks)	Error! Bookmark not defined.
Part 2: Design a database (25 marks)	9
i) ERD diagram	9
ii) Relational Database Model	10
Part 3: Implement a database (30 marks)	16
i) Attributes and their data types	16
Part 4: Query a database (each sub-part carries 5 marks; max of 25 marks)	32
Part 5: Teamwork and Presentation (10 marks)	37

General information:

No	Student ID	Name	Email address
1	21099403	Wayne Kan Kah Weng	21099403@imail.sunway.edu.my
2	22017503	Goh Ci Yun	22017503@imail.sunway.edu.my
3	22025670	Ryan Ng Xu Yang	22025670@imail.sunway.edu.my
4	23026610	Pu Xinyi	23026610@imail.sunway.edu.my
5	22035455	Lam Chee Hiew	22035455@imail.sunway.edu.my

Part 1: Enhance the chosen case scenario (10 marks)

SUNNY LEGAL FIRM



Sunny Legal Firm is a firm owned by a group of lawyers under the supervision of Jeff Chime. This firm has established a good reputation of no loses in the courtroom and deals with any business within Sun City. The firm deals with part of a criminal law: major violent crimes. Major violent crimes consist of murder, rape, kidnapping, armed robbery, car jacking, attempted murder, armed house invasion, and burglary.

A civilian who has legal problems will usually seek help from this firm and is immediately classified as a "client" in the company's database. Particulars are stored, and the database will generate a unique ID for the client, which is known as the "client number." Particulars taken from the client are name, address, and contact number. The case of the client will then be handled by the specific lawyer, who is a specialist in that particular section of law. Lawyer ID is also stored in the customer's record to help in searching for the lawyer in charge of handling the case. Each client is only entitled to one lawyer and cannot have more than that.

The lawyers in this firm are all experienced lawyers and have a good reputation in Sun City's society. Each lawyer's particulars are stored in the company's database and given a unique "Lawyer ID," which is invariant. Important particulars such as name, address, contact number, field expertise, case won, and case lost are recorded. The number of cases won and lost is essential to proving the ability of the lawyer to handle the case. A lawyer can have more than one customer at a time.

Every case has its own trial. Every time a trial is set, a trial number will be created to help in searching for the trial's information. The date of trial is also taken because lawyers and clients need to know their case's trial date. After every trial, the status of the trial is edited and can be either won, lost, or pending. The client's ID is important to trial for the firm to counter-check which customer is related to which case. For each trial, a location code is recorded to check where the trial is being held. One trial is only for one case.

A code of law is a database or record that stores the type of violation and description of the criminal law being convicted. The penalty for the violation is recorded, and all this data is for the reference of lawyers and clients. Each code of law has only one description and penalty.

To run a trial, a court must exist, and therefore, lawyers and clients must know the location of the court and its class, which shows the level of the court. There are only 3 levels, which are A, B, and C. A class court handles cases dealing with death. B-class court deals with theft cases, and C-class court deals with sexually related cases.

Table 1 lists the attributes to be incorporated in your database implementation.

Table 1

Attributes	Description
Client Number	A unique identifier for customer
Client Name	Name of the client for Sunny
Client Address	Address of the customer of the law firm
Client Contact Number	Contact number of the client
Lawyer ID	A unique identifier for lawyers in the firm
Lawyer Name	Name of lawyer in the firm
Lawyer Address	Address of lawyer in the firm
Lawyer Contact Number	Contact number of the lawyer
Field Expertise	Part of the law that the lawyer is familiar with
Cases Won	Number of cases won throughout the lawyer career
Cases Lose	Number of cases lose throughout the lawyer career
Trial No	A unique identifier for trial
Date of Trial	Trial date for the case
Location Code	A unique identifier for the court location
Code of Law	A unique identifier for the code of law
Status	To show whether the trial is won, lose or pending
Court Class	To shoe whether the court is class A, B or C
Judge in-charge	Show the name of the judge in charge of the court

SEG1201 Database Fundamentals (September 2023)

Paragraph: A civilian who has legal problems will usually seek help from this firm and is immediately classified as a "client" in the company's database. Particulars are stored, and the database will generate a unique ID for the client, which is known as the "client_ID". Particulars taken from the client are name, address, and contact number. The case of the client will then be handled by the specific lawyer, who is a specialist in that particular section of law. Lawyer ID is also stored in the customer's record to help in searching for the lawyer in charge of handling the case. Each client may be entitled to multiple lawyers if they are involved in several cases, but a single case can only be associated with one lawyer.

There will be judges for each trial that will decide how the trial will proceed. Every judge has a unique ID stored in the database. Their name, contact number, and address will be recorded in the database for effective communication. Their experience level demonstrates

their expertise, while the assigned Trials ID keeps track of ongoing cases allocated to the judge, facilitating effective case management and allocation. Each judge may preside over multiple trials concurrently. A court clerk, identified by the unique "Clerk ID" generated by the database manages the intricate details of the proceedings with precision. The court clerk ensures that the date of the trial is recorded to facilitate a seamless and well-structured legal process. The court clerk has the capability to document either a single trial or multiple trials. Important details, such as the type of violation, description of the criminal law, and the penalty for the violation, are meticulously recorded.

Sunny Legal firm implemented a feedback system to receive feedback from their clients after each case to improve their service quality. Each client can give one feedback on their lawyer for per case. The database generates a unique ID for each feedback. Each feedback is linked to a unique ID of the client and the lawyer, encompassing ratings on communication, professionalism, and overall satisfaction. All these will be stored for every feedback ID in the database. This feedback is then able to be used for clients when choosing a lawyer. Clients are required to make payment after each closed case. Each payment will have a unique payment ID in the database. Every Payment ID functions as a distinct identification for payments made by payer. payer makes it easy to identify who made the payment. Date captures the date of payment, whereas Amount shows the total amount paid. The term "Payment Method" designates the manner of payment—cash, credit card, or other. Payment can be made by either the client or the opposing party in court, depending on the outcome of the trial.

Business rules:

Client:

1. Each client should have its own unique client ID for identification.
2. Client should include their name, address, and contact number.
3. A civilian becomes a "client" when they seek legal help from Sunway Legal Firm.
4. Each client is associated with one lawyer per case.
5. Each client should have its own unique feedback ID after their feedback is complete given.

Lawyer:

1. Each lawyer is assigned a unique "Lawyer ID" to identify each lawyer.
2. Lawyer particulars include name, address, contact number, year of services.
3. Each lawyer can handle multiple clients, but each client is entitled to only one lawyer.
4. Lawyers' performance can be assessed based on feedback from clients to improve their service.
5. Lawyer's unique ID is linked to the feedback unique ID.
6. Lawyers are associated with specific cases or trials.
7. Each Lawyer should have its own unique Lawyer Stats ID.

Trials

1. Each trial should have its own unique trial ID.
2. The "Trials" table should have foreign keys referencing both clients and lawyers, ensuring that a trial involves a valid client and assigned lawyer.
3. The trial date must be in the future or current date, preventing past dates for trial scheduling.
4. Each trial is associated with one client.
5. Each trial is associated with one law ID.
6. Each trial is handled by one lawyer.
7. After each trial, the status can be updated as won, lost, or pending.
8. Each trial is associated with one specified court.
9. Each trial must have at least one judge.

Case

1. Each case has its own unique ID
2. Each case has one lawyer.
3. Each case has one client.
4. Every case has its own trial.
5. Each case can have multiple trials.
6. Each case has one filed date.

Judge

1. Each judge should have its own unique judge ID.
2. Judge records must contain essential information such as name, address, contact number and experience level.
3. Each judge can preside over multiple trials.

Court

1. Each court has a unique identifier (Court ID) distinguishing it from other courts.
2. Courts need to have specific locations, including physical addresses, to facilitate legal proceedings.
3. Each court have different classes.
4. A-class court deals with death related cases.
5. B-class court deals with theft cases.
6. C-class court deals with sexually related cases.
7. Each court can run many trials at different times.
8. Each trial can only be run at one court.
9. Lawyers and clients must know the destination of the court and its class that will run their trial.

Code of Law

1. One individual can be convicted of various type of violations.
2. One individual will not receive any convictions.
3. A single individual can be associated with multiple codes of law.

4. Each code of law will have only one corresponding description and penalty.
5. Same penalty may be applied on many individuals.

Feedback

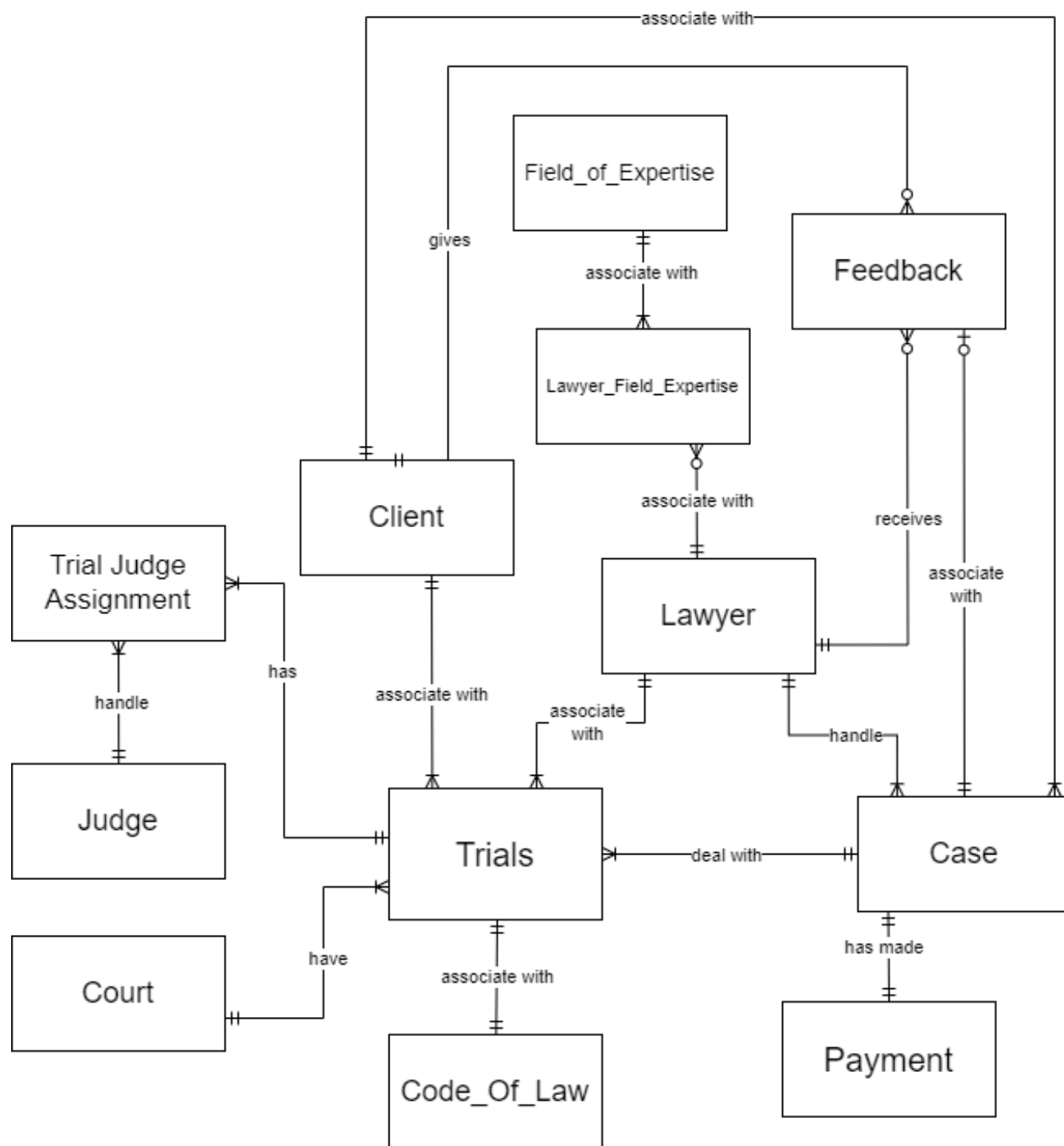
1. Each feedback has one unique ID.
2. Each feedback is given by one client.
3. One feedback is given for one closed case.
4. Some clients may not give feedback yet.
5. A lawyer can receive one feedback for one closed case.
6. Every case can have only one feedback.
7. Each feedback's unique ID is assigned one rating on communication.
8. Each feedback's unique ID is assigned one rating on professionalism.
9. Each feedback's unique ID is assigned one rating on overall satisfaction.

Payment

1. Each payment has a unique ID.
2. Some cases may not have been paid yet.
3. Every payor can choose the payment method.
4. Every payment is made by only one payer.
5. Not all payments are paid by client.
6. Each payment can only associate with one case.
7. Each case can only have one payment.

Part 2: Design a database (25 marks)

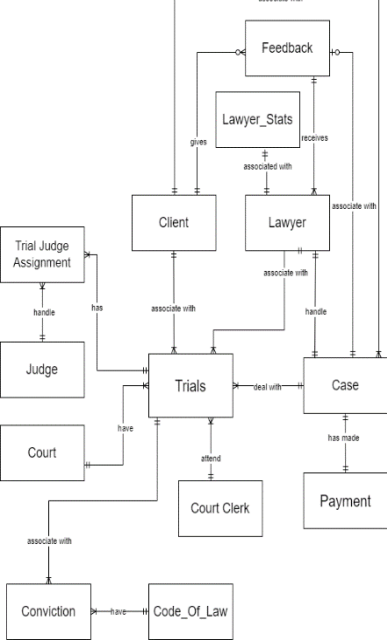
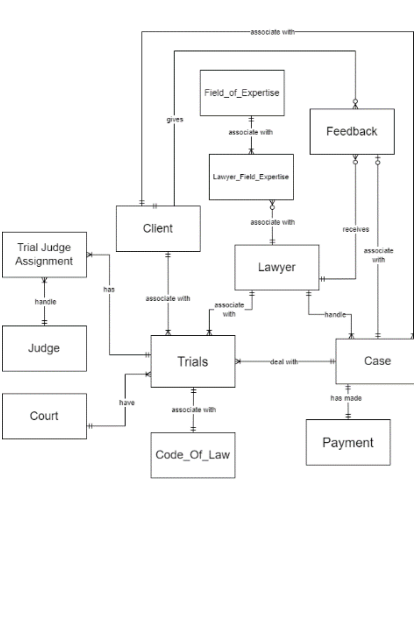
i) ERD diagram



ii) Relational Database Model

<p>Client</p> <p><u>Client_ID- primary key</u> Client_Name Client_Address Client_Contact_Number</p>	<p>Lawyer</p> <p><u>Lawyer_ID- primary key</u> Lawyer_Name Lawyer_Address Lawyer_Contact_Number Lawyer_Email Years_Of_Service</p>
<p>Trials</p> <p><u>Trial_ID- primary key</u> Trial_Date Trial_Status Court_ID Case_ID Client_ID Lawyer_ID Law_ID</p> <p>FOREIGN KEY Court_ID REFERENCES TABLE Court</p> <p>FOREIGN KEY Case_ID REFERENCES TABLE Case</p> <p>FOREIGN KEY Client_ID REFERENCES TABLE Client</p> <p>FOREIGN KEY Lawyer_ID REFERENCES TABLE Lawyer</p> <p>FOREIGN KEY Law_ID REFERENCES TABLE Code of Law</p>	<p>Case</p> <p><u>Case_ID-primary key</u> Client_ID Lawyer_ID Case_Date Closed_Date Case_Status Case_Results Payments_ID</p> <p>FOREIGN KEY Client_ID REFERENCES TABLE Client</p> <p>FOREIGN KEY Lawyer_ID REFERENCES TABLE Lawyer</p> <p>FOREIGN KEY Payments_ID REFERENCES TABLE PAYMENTS</p>
<p>Judge</p> <p><u>Judge_ID-primary key</u> Judge_Name Judge_Address Judge_Contact_Number Judge_Email Experience_Level</p>	<p>Code of Law</p> <p><u>Law_ID – primary key</u> Violation Description Penalty</p>
court	PAYMENTS

<u>Court_ID-primary key</u> class_type court_location	<u>PAYMENTS_ID – primary key</u> Payer PAYMENTS_status PAYMENTS_amount PAYMENTS_Date
Feedback <u>Feedback_ID-primary key</u> Feedback_Date Case_ID Client_ID Lawyer_ID Overall_Satisfaction FOREIGN KEY Case_ID REFERENCES TABLE Case FOREIGN KEY Client_ID REFERENCES TABLE Client FOREIGN KEY Lawyer_ID REFERENCES TABLE Lawyer	Field of Expertise <u>Field_ID-primary key</u> Field Name Field Description
Trial Judge Assigned <u>Judge_ID-primary key</u> <u>Trial_ID-primary key</u> FOREIGN KEY Judge_ID-primary key REFERENCES TABLE Judge FOREIGN KEY Trial_ID-primary key REFERENCES TABLE Trials	Lawyer_Field_Expertise <u>Judge_ID-primary key</u> <u>Field_ID-primary key</u> FOREIGN KEY Judge_ID-primary key REFERENCES TABLE Judge FOREIGN KEY Field_ID-primary key REFERENCES TABLE Field of Expertise

No	Before Update	After Update	Justification
1.			<p>There were too many relationships and entities at first and this result in a cluttered and disorganized database</p>
2.	<p><i>Lawyer</i></p> <p><u>Lawyer_ID- primary key</u> Lawyer_Name Lawyer_Address Lawyer_Contact_Number</p>	<p><i>Lawyer</i></p> <p><u>Lawyer_ID- primary key</u> Lawyer_Name Lawyer_Address Lawyer_Contact_Number Lawyer_Email Years_Of_Service</p>	<p>Lawyer_Email helps streamline communication between clients, colleagues, and law firms. At the same time. Years_Of_Service allows customers to quickly understand the professional level and tenure of lawyers in handling legal matters.</p>
3.	<p><i>Payment</i></p> <p><u>Payment_ID – primary key</u> Case_ID Payer Payment_status Payment_amount Payment_Date</p> <p>FOREIGN KEY Case_ID REFERENCES TABLE Case</p>	<p><i>PAYMENTS</i></p> <p><u>PAYMENTS_ID – primary key</u> Payer PAYMENTS_status PAYMENTS_amount PAYMENTS_Date</p>	<p>Remove case id to prevent transitive dependency of attribute payer being dependent on whether case status is closed.</p>

4.	-	Field of Expertise <u>Field_ID-primary key</u> Field Name Field Description	The new 'Field of Expertise' table defines different areas of specialization through unique Field_ID. It includes details like the Field Name and a descriptive Field Description.
5.	-	Lawyer_Field_Expertise <u>Judge_ID-primary key</u> <u>Field_ID-primary key</u> FOREIGN KEY Judge_ID-primary key REFERENCES TABLE Judge FOREIGN KEY Field_ID- primary key REFERENCES TABLE Field of Expertise	The new "Lawyer_Field_Expertise" table enables a many-to-many relationship between lawyer and fields of expertise.
6.	Feedback <u>Feedback_ID-primary key</u> Feedback_Date Case_ID Client_ID Lawyer_ID Communication_Rating Professionalism_Rating Satisfaction_Rating FOREIGN KEY Case_ID REFERENCES TABLE Case FOREIGN KEY Client_ID REFERENCES TABLE Client FOREIGN KEY Lawyer_ID REFERENCES TABLE Lawyer	Feedback <u>Feedback_ID-primary key</u> Feedback_Date Case_ID Client_ID Lawyer_ID Overall_Satisfaction FOREIGN KEY Case_ID REFERENCES TABLE Case FOREIGN KEY Client_ID REFERENCES TABLE Client FOREIGN KEY Lawyer_ID REFERENCES TABLE Lawyer	Combining personal communication, professionalism, and satisfaction ratings into a single "overall satisfaction" attribute in your feedback form streamlines the feedback process, unifies ratings, simplifies analysis, and provides a complete view of customer satisfaction.

7.	<p>Trials</p> <p>Trial_ID- primary key</p> <p>Trial_Date</p> <p>Trial_Status</p> <p>Court_ID</p> <p>Case_ID</p> <p>Client_ID</p> <p>Lawyer_ID</p> <p>Judge_ID</p> <p>Law_ID</p> <p>FOREIGN KEY Court_ID REFERENCES TABLE Court</p> <p>FOREIGN KEY Case_ID REFERENCES TABLE Case</p> <p>FOREIGN KEY Client_ID REFERENCES TABLE Client</p> <p>FOREIGN KEY Lawyer_ID REFERENCES TABLE Lawyer</p> <p>FOREIGN KEY Judge_ID REFERENCES TABLE Judge</p> <p>FOREIGN KEY Law_ID REFERENCES TABLE Code of Law</p>	<p>Trials</p> <p><u>Trial_ID-primary key</u></p> <p>Trial_Date</p> <p>Trial_Status</p> <p>Court_ID</p> <p>Case_ID</p> <p>Client_ID</p> <p>Lawyer_ID</p> <p>Law_ID</p> <p>FOREIGN KEY Court_ID REFERENCES TABLE Court</p> <p>FOREIGN KEY Case_ID REFERENCES TABLE Case</p> <p>FOREIGN KEY Client_ID REFERENCES TABLE Client</p> <p>FOREIGN KEY Lawyer_ID REFERENCES TABLE Lawyer</p> <p>FOREIGN KEY Law_ID REFERENCES TABLE Code of Law</p>	<p>Judge_ID is removed in trials table as the relationship of "Judge_ID" entity and "Trials" table are not same as the ERD diagram as it will affect the accuracy of our database system.</p>
8.	<p>Case</p> <p><u>Case_ID-primary key</u></p> <p>Client_ID</p> <p>Lawyer_ID</p> <p>Case_Date</p> <p>FOREIGN KEY Client_ID REFERENCES TABLE Client</p> <p>FOREIGN KEY Lawyer_ID REFERENCES TABLE Lawyer</p>	<p>Case</p> <p><u>Case_ID-primary key</u></p> <p>Client_ID</p> <p>Lawyer_ID</p> <p>Case_Date</p> <p>Closed_Date</p> <p>Case_Status</p> <p>Case_Results</p> <p>Payments_ID</p> <p>FOREIGN KEY Client_ID REFERENCES TABLE Client</p> <p>FOREIGN KEY Lawyer_ID</p>	<p>Expanding the Case table to include Closed_Date, Case_Status, and Case_Results provides essential details about case closure, status, and outcomes, facilitating better case management and analysis.</p> <p>Expanding the Case table to include Payments_ID allows for direct association with the payment details linked to a specific case. By referencing the Payments table via this identifier, it enables efficient tracking</p>

		<i>REFERENCES</i> <i>TABLE Lawyer</i> <i>FOREIGN KEY</i> <i>Payments_ID</i> <i>REFERENCES</i> <i>TABLE PAYMENTS</i>	and association of payments made or received that correspond to a particular case outcome.
--	--	--	--

Part 3: Implement a database (30 marks)

i) Attributes and their data types

Table/attributes	Description	Data Type	Justification
CLIENT	Table name	-	
<u>Client_ID</u>	Client identification number	CHAR (5)	Fixed number of digits eg; 230211120
Client_Name	Client name	VARC HAR 2(30)	The name field value is a variable with different length
Client_Address	Client address	VARC HAR2(100)	The address field value is a variable with different length
Client_Contact_Number	Client contact number	CHAR (10)	Fixed number of digits
LAWYER	Table name	-	
Lawyer_ID	Unique identifier for each lawyer	CHAR (6)	Fixed number of characters eg; AX1201
Lawyer_Name	Lawyer name	VARC HAR 2(30)	The name field value is a variable with different length
Lawyer_Address	Lawyer address	VARC HAR2(100)	Address field value is a variable with different length
Lawyer_Contact_Number	Lawyer contact number	CHAR (10)	Fixed number of digits
Lawyer_Email	Lawyer Email	VARC HAR (40)	Email field value is a variable with different length
Years_Of_Service	How many years the lawyer has been in service	INTER VAL YEAR [(year _preci sion)] TO MONT H	stores intervals using year and month.
TRIALS			
Trial_ID	Trial identification number	CHAR (8)	Fixed number of characters

Trial_Date	Trial date	DATE	Ensure accurate data storage
Trial_Status	Trial status	VARC HAR2 (10)	Stores variable-length of characters, eg; win / lose / pending
Court_ID	Court identification number	NUMB ER(3, 0)	Fixed number of numbers
Case_ID	Case identification number	CHAR (7)	Fixed number of characters eg; CG42790
Client_ID	Client identification number	CHAR (5)	Fixed number of characters
Lawyer_ID	Unique identifier for each lawyer	CHAR (6)	Fixed number of characters eg; AX1201
Law_ID	Law identification number	CHAR (5)	Fixed number of characters
CASE			
Case_ID	Case identification number	CHAR (7)	Fixed number of characters eg; CG42790
Client_ID	Client identification number	CHAR (5)	Fixed number of characters
Lawyer_ID	Unique identifier for each lawyer	CHAR (6)	Fixed number of characters eg; AX1201
Case_Date	Date of case filed	DATE	Store date
Closed_Date	Date of case closed	DATE	Store date
Case_Status	Stores the status of the case whether closed or ongoing	VARC HAR (7)	Enable flexible storage of case-related details, eg; open / closed
Case_Result	Case result	VARC HAR (78)	Stores variable-length of characters, eg; won / lost / pending
PAYMENTS_ID	Payment's unique ID	CHAR (3)	Fixed number of characters eg; A01

JUDGES			
Judge_ID	Judge identification number	Number (6,0)	Fixed number of numbers
Judge_ Name	Judge name	VARCHAR2 (30)	The name field value is a variable with different length
Judge_ Address	Judge address	VARCHAR2 (40)	Address field value is a variable with different length
Judge_Contact_Number	Judge contact number	CHAR (10)	Fixed number of characters
Judge_Email	Judge's email	VARCHAR2 (40)	Email field is a variable with different length
Experience_Level	Judge experience level	VARCHAR (20)	flexible storage solution for describing various levels of judge experience
COURT			
Court_ID	Court identification number	Number (3,0)	Fixed number of digits
class_type	Court class type	CHAR (1)	Either A, B, or C
Court_location	Court location	CHAR (5)	The address field value is a variable with different length
CODE OF LAW			
Law_ID	Law identification number	CHAR (5)	Fixed number of characters
Violation	Violation type	VARCHAR2 (50)	Fixed variable length
Description	Description of the Law	CLOB	Store large amount of character data
Penalty	Penalty	VARCHAR (50)	Fixed variable length
JUDGE_ASSIGNED			

Judge_ID	Lawyer identification number	NUMBER (6)	Fixed number of characters eg; AX1201
Trial_ID	Trial identification number	CHAR (8)	Fixed number of characters
FEEDBACK			
Feedback_ID	Feedback identification number	CHAR (8)	Fixed number of characters e.g. "FB1000A"
Date	Date of the feedback given	DATE	Ensure accurate data storage
Case_ID	Case identification number	CHAR (7)	Fixed number of characters eg; CG42790
Client_ID	Client identification number	CHAR (5)	Fixed number of characters
Lawyer_ID	Unique identifier for each lawyer	CHAR (6)	Fixed number of characters eg; AX1201
Overall_Satisfaction	Feedback given in terms of overall satisfaction	Number (1)	Fixed number of digits
PAYMENTS			
PAYMENTS_ID	Payment identification number	CHAR (3)	Fixed number of characters eg; A01
Payer	Who made the payment. (Client or Opposing)	VARCHAR(8)	Flexible storage of payer with different lengths
PAYMENTS_stat	Status of the payment	VARCHAR (10)	Flexible storage of payment status with efficient memory usage
PAYMENTS_amt	Payment amount	DECIMAL(7,2)	store double-precision floating-point numbers
PAYMENTS_date	Date when payment was made	DATE	Ensure accurate data storage
FIELD OF EXPERTISE			
Field_ID	Unique identifier for each field of expertise	Number (2, 0)	Fixed number of digits
Field_Name	Name of the Field Expertise	VARCHAR2(255)	Flexibility in storing various field names with differing lengths.

			e.g. "Criminal Law"
Field_Description	Description of the Field	CLOB	Store large amount of character data
LAWYER FIELD EXPERTISE			
Lawyer_ID	Unique identifier for each lawyer	CHAR (6)	Fixed number of characters e.g. "AX1201"
Field_ID	Unique identifier for each field of expertise	Number (2, 0)	Fixed number of digits

ii) Database script listing

-- Dropping tables with correct syntax

```
DROP TABLE feedback CASCADE CONSTRAINTS;
DROP TABLE Clients CASCADE CONSTRAINTS;
DROP TABLE Lawyer CASCADE CONSTRAINTS;
DROP TABLE Trial CASCADE CONSTRAINTS;
DROP TABLE code_of_law CASCADE CONSTRAINTS;
DROP TABLE court CASCADE CONSTRAINTS;
DROP TABLE PAYMENTS CASCADE CONSTRAINTS;
DROP TABLE Case CASCADE CONSTRAINTS;
DROP TABLE judges CASCADE CONSTRAINTS;
DROP TABLE JUDGE_ASSIGNED CASCADE CONSTRAINTS;
DROP TABLE FIELD_OF_EXPERTISE CASCADE CONSTRAINTS;
DROP TABLE LAWYER_FIELD_EXPERTISE CASCADE CONSTRAINTS;
```

-- Creating tables with corrected constraints and relationships

```
CREATE TABLE Clients (
  Client_ID CHAR(5) PRIMARY KEY,
  Client_Name VARCHAR2(30),
  Client_Address VARCHAR2(100),
  Client_Contact_Number CHAR(10)
);
```

```
CREATE INDEX idx_client_contact_number ON Clients(Client_Contact_Number);
```

```
INSERT INTO Clients VALUES ('A1001', 'Sam Wong', '4, Jalan Puchong, Bandar Bukit Puchong, 47120 Puchong, Selangor.', '0122079999');
INSERT INTO Clients VALUES ('A1002', 'Chong York Ching', '51, Jln 2/16, Bandar Baru Selayang, 68100 Selayang, Selangor.', '0180704003');
INSERT INTO Clients VALUES ('A1003', 'Leong Sok Peng', '13, Jalan 20/7, Paramount Garden, 46300 Petaling Jaya, Selangor.', '0131111208');
INSERT INTO Clients VALUES ('A1004', 'Farhana Zikri', '11, Jalan P 2/18, Seksyen 2, Bandar Teknologi, 43500 Kajang, Selangor.', '0190102345');
INSERT INTO Clients VALUES ('A1005', 'Yana Puteri', '20, Jalan Utara, 55100 Wilayah Persekutuan, Kuala Lumpur.', '0175454301');
```

```

INSERT INTO Clients VALUES ('A1006', 'Will Wong', '18,Jalan Rebana,Taman Jaya,41200 Klang,Selangor.',
'0101112656');
INSERT INTO Clients VALUES ('A1007', 'Chong York Ching', '3,Jalan SS7/19,Kelana Jaya,47301 Petaling
Jaya,Selangor.', '0116066654');
INSERT INTO Clients VALUES ('A1008', 'Cheong Chyi Bin', '51-52,Jalan Tun Abdul Aziz,Bandar Kajang,43000
Kajang,Selangor.', '0190187656');
INSERT INTO Clients VALUES ('A1009', 'Wong Shi Qing', '20-1,Jalan PJU 8/5G,Bandar Damansara
Perdana,47820 Petaling Jaya,Selangor.', '0178881716');
INSERT INTO Clients VALUES ('A1010', 'Amir Ismail', '8,Jalan SS 6/1,Kelana Jaya,47301 Petaling Jaya,Selangor.',
'0115980332');
INSERT INTO Clients VALUES ('A1011', 'Chua Sui Lee', '19,Jalan Maju 2/1,Taman Lembah Maju,56100 Wilayah
Perseutuan,Kuala Lumpur', '0101110789');
INSERT INTO Clients VALUES ('A1012', 'Lewis Leong', '3-12A Jalan Pju 8/3, Damansara Perdana,47820 Petaling
Jaya,Selangor.', '0150409832');
INSERT INTO Clients VALUES ('A1013', 'Lam Xin Yee', '25,Jalan 51A/243,Seksyen 51A,46000 Petaling
Jaya,Selangor.', '0178786101');
INSERT INTO Clients VALUES ('A1014', 'Tan Zhi Huey', 'B-86,Jalan Othman Seksyen 1,46000 Petaling Jaya',
'0102005002');
INSERT INTO Clients VALUES ('A1015', 'Ismail Ali', '139,Jalan SS 19/6, 47500 Petaling Jaya,Selangor.',
'0125450888');

```

```

CREATE TABLE Lawyer (
    Lawyer_ID CHAR(6) PRIMARY KEY,
    Lawyer_Name VARCHAR2(30),
    Lawyer_Address VARCHAR2(100),
    Lawyer_Contact_Number CHAR(10),
    Lawyer_Email VARCHAR2(40),
    Years_Of_Service INTERVAL YEAR TO MONTH
);

```

```

CREATE INDEX idx_lawyer_name ON Lawyer(Lawyer_Name);

```

```

INSERT INTO Lawyer VALUES ('LA1201', 'Leong Ming', 'No. 23, Jalan PJS 7/19, Bandar Sunway, 46150 Subang
Jaya, Selangor.', '0143221288', 'leongming1201@gmail.com', INTERVAL '3-1' YEAR TO MONTH);
INSERT INTO Lawyer VALUES ('LA1202', 'Chong Xuan Ni', '1179, Jln Subang Batu 3, 40000 Shah Alam,
Selangor.', '0122623443', 'xuanni1202@gmail.com', INTERVAL '3-6' YEAR TO MONTH);
INSERT INTO Lawyer VALUES ('LA1203', 'Lim Man Ting', 'No. 284, Jalan Batu Unjur 7, Bayu Perdana, 41200
Klang, Selangor.', '0122612212', 'manting1203@gmail.com', INTERVAL '2-9' YEAR TO MONTH);
INSERT INTO Lawyer VALUES ('LA1204', 'John Chin', '35, Jalan Ss 17/1F, 47500 Subang Jaya, Selangor.',
'0145670104', 'johnchin1204@gmail.com', INTERVAL '1-6' YEAR TO MONTH);
INSERT INTO Lawyer VALUES ('LA1205', 'Carmen Lim', 'No. 44, Jln Segambut, Pusat Taman Segambut, 51200
Wilayah Persekutuan, Kuala Lumpur.', '0112214533', 'carmenlim1205@gmail.com', INTERVAL '1-8' YEAR TO
MONTH);
INSERT INTO Lawyer VALUES ('LA1206', 'Ali Fariz', 'No. 5, Jalan Gopeng, Jalan Pasar, 41400 Klang, Selangor.',
'0122623493', 'alifariz1206@gmail.com', INTERVAL '3-6' YEAR TO MONTH);
INSERT INTO Lawyer VALUES ('LA1207', 'Wong Man Khei', '127, Jalan Kristal L 7/L, Seksyen 7, 40000 Shah
Alam, Selangor.', '0122210543', 'mankhei1207@gmail.com', INTERVAL '2-6' YEAR TO MONTH);

INSERT INTO Lawyer VALUES ('LA1208', 'Sam Chong', '16 Jalan Ss6/8, Ss6, 47301 Petaling Jaya,Selangor.',
'0190081200', 'samchong1208@gmail.com', INTERVAL '2-3' YEAR TO MONTH);
INSERT INTO Lawyer VALUES ('LA1209', 'Puteri Bunga', '11B,Jalan Tk 1/11A Taman Kinrara 47100
Puchong,Selangor.', '0196998650', 'puteribunga1209@gmail.com', INTERVAL '3-1' YEAR TO MONTH);

```

```

INSERT INTO Lawyer VALUES ('LA1210', 'Khadijah Amir', '25,Jalan Scott,50470 Wilayah Persekutuan,Kuala Lumpur.', '0190081700', 'khadijah1210@gmail.com', INTERVAL '2-9' YEAR TO MONTH);
INSERT INTO Lawyer VALUES ('LA1211', 'George Lim', '25,Jalan SS14/2,431300 Petaling Jaya, Selangor', '0190012009', 'georgelim1211@gmail.com', INTERVAL '1-9' YEAR TO MONTH);
INSERT INTO Lawyer VALUES ('LA1212', 'Loke Xin Yu', '11,Jalan Utah,Bukit Bintang,50470 Wilayah Persekutuan,Kuala Lumpur.', '0190050300', 'xinyu1212@gmail.com', INTERVAL '2-1' YEAR TO MONTH);
INSERT INTO Lawyer VALUES ('LA1213', 'Lok Zai Mei', '19,Jalan Westside,Desa Park City,50120 Petaling Jaya,Selangor.', '0153112023', 'zaimei1213@gmail.com', INTERVAL '2-5' YEAR TO MONTH);
INSERT INTO Lawyer VALUES ('LA1214', 'Siow Mei Xuan', '10,Jalan BPP 4/4a,Kota Damansara, 47301 Petaling Jaya,Selangor.', '0153112023', 'meixuan1214@gmail.com', INTERVAL '3-8' YEAR TO MONTH);
INSERT INTO Lawyer VALUES ('LA1215', 'Yong Zi Ning', '12,Jalan KD12/1,Kota Damansara, 47301 Petaling Jaya,Selangor.', '0153112023', 'meixuan1214@gmail.com', INTERVAL '1-2' YEAR TO MONTH);

```

```

ALTER TABLE Lawyer ADD Service_Period VARCHAR2(20);
UPDATE Lawyer
SET Service_Period = EXTRACT(YEAR FROM Years_Of_Service) || ' years ' || EXTRACT(MONTH FROM Years_Of_Service) || ' months';
ALTER TABLE Lawyer DROP COLUMN Years_Of_Service;
ALTER TABLE Lawyer RENAME COLUMN Service_Period TO Years_Of_Service;
--is sequence of commands first adding a new column (Service_Period) to store the formatted service period data.
--Then, it populates this new column with the formatted information extracted from the original Years_Of_Service column. (x years y months)
-- Afterwards, removes the original column and renames the new column to maintain the structure while updating the representation of the service period.

```

```

CREATE TABLE judges (
    Judge_ID NUMBER(6, 0) PRIMARY KEY,
    Judge_Name VARCHAR2(30),
    Judge_Address VARCHAR2(100),
    Judge_Contact_Number CHAR(10),
    Judge_Email VARCHAR2(40) CHECK (REGEXP_LIKE(Judge_Email, '^[A-Za-z0-9._%+-]+@[A-Za-z0-9.-]+\.[A-Z|a-z]{2,}$')),
    Experience_Level VARCHAR2(20) CHECK (Experience_Level IN ('Junior', 'Senior'))
);

```

```

CREATE INDEX idx_judges_name ON judges(Judge_Name);

```

```

INSERT INTO judges VALUES('230160', 'Jack Smith', '22, Jalan Meranti, Taman Bukit Perdana, 43000 Kajang, Selangor.', '0126541203', 'smith54@gmail.com', 'Senior');
INSERT INTO judges VALUES('230161', 'W Johnson', '45, Jalan Delima, Bandar Baru Bangi, 43650 Bangi, Selangor.', '0165421507', '120johnson@gmail.com', 'Junior');
INSERT INTO judges VALUES('230162', 'Williams Kim', '78, Jalan Anggerik, Kota Damansara, 47810 Petaling Jaya, Selangor.', '0115495200', 'williamskim@gmail.com', 'Senior');
INSERT INTO judges VALUES('230163', 'Careen Tan', '32, Jalan Seroja, Bukit Jelutong, 40150 Shah Alam, Selangor.', '0125548785', 'careenthye@gmail.com', 'Junior');
INSERT INTO judges VALUES('230164', 'Lee Vanessa', '55, Jalan Cengal, Bandar Utama, 47800 Petaling Jaya, Selangor.', '0185462001', 'leevanessa98@gmail.com', 'Senior');
INSERT INTO judges VALUES('230165', 'Isaac Miller', '88, Jalan Teratai, Subang Jaya, 47620 Subang Jaya, Selangor.', '0187658133', 'miller23hng@gmail.com', 'Junior');

```

```

INSERT INTO judges VALUES('230166', 'Cheah Joyce', '12, Jalan Mawar, Puchong Jaya, 47100 Puchong,
Selangor.', '0135421022', 'joycechy8@gmail.com', 'Senior');
INSERT INTO judges VALUES('230167', 'Ooi Tyler', '67, Jalan Dahlia, Seri Kembangan, 43300 Seri Kembangan,
Selangor.', '0111235451', 'tyler2543@gmail.com', 'Junior');
INSERT INTO judges VALUES('230168', 'Ching Jeslyn', '98, Jalan Kenanga, Ampang, 68000 Ampang, Selangor.',
'0178520035', 'jjeslyn@gmail.com', 'Senior');
INSERT INTO judges VALUES('230169', 'Hong Melissa', '41, Jalan Angsana, Cyberjaya, 63000 Cyberjaya,
Selangor.', '0126875124', 'melissaa111@gmail.com', 'Junior');
INSERT INTO judges VALUES('230170', 'John Doe', '64, Jalan Bunga Raya, Putrajaya, 62000 Putrajaya.',
'0127487681', 'johndoe@gmail.com', 'Senior');
INSERT INTO judges VALUES('230171', 'Kim Jennie', '27, Jalan Melor, Klang, 41000 Klang, Selangor.',
'0198745622', 'janesmith@gmail.com', 'Junior');
INSERT INTO judges VALUES('230172', 'Michael Johnson', '76, Jalan Dahlia, Shah Alam, 40460 Shah Alam,
Selangor.', '0100427893', 'michaeljohnson@gmail.com', 'Senior');
INSERT INTO judges VALUES('230173', 'Tan Emily', '21, Jalan Cempaka, Kota Kemuning, 40460 Shah Alam,
Selangor.', '0164867004', 'emilywilliams@gmail.com', 'Junior');
INSERT INTO judges VALUES('230174', 'Robert Lee', '53, Jalan Baiduri, Sungai Buloh, 47000 Sungai Buloh,
Selangor.', '0187610505', 'robertlee@gmail.com', 'Senior');

```

```

CREATE TABLE PAYMENTS (
    PAYMENTS_ID CHAR(3) PRIMARY KEY,
    payer VARCHAR(8) CHECK (payer IN ('Client', 'Opposing')),
    PAYMENTS_stat VARCHAR(10) CHECK (PAYMENTS_stat IN ('Paid', 'Unpaid')),
    PAYMENTS_amt DECIMAL(7,2) CHECK (PAYMENTS_amt >= 0) NOT NULL,
    PAYMENTS_date DATE
);

CREATE OR REPLACE TRIGGER trg_payments_date
BEFORE INSERT OR UPDATE ON PAYMENTS
FOR EACH ROW
BEGIN
    IF :new.PAYMENTS_stat = 'Paid' AND :new.payer IS NULL THEN
        RAISE_APPLICATION_ERROR(-20005, 'Payments with status "Paid" must have a payer');
    END IF;

    IF :new.PAYMENTS_date > SYSDATE THEN
        RAISE_APPLICATION_ERROR(-20004, 'Payments date cannot be in the future');
    END IF;
END;
/

```

```

INSERT INTO PAYMENTS VALUES('A01', 'Client', 'Paid', 14450, TO_DATE('2023-06-01', 'YYYY-MM-DD'));
INSERT INTO PAYMENTS VALUES('A02', 'Client', 'Paid', 15050, TO_DATE('2023-06-02', 'YYYY-MM-DD'));
INSERT INTO PAYMENTS VALUES('B03', 'Opposing', 'Unpaid', 20000, NULL);
INSERT INTO PAYMENTS VALUES('B04', 'Client', 'Paid', 13400, TO_DATE('2023-06-10', 'YYYY-MM-DD'));
INSERT INTO PAYMENTS VALUES('C05', NULL, 'Unpaid', 14000, NULL);
INSERT INTO PAYMENTS VALUES('D06', 'Opposing', 'Paid', 24000, TO_DATE('2023-07-20', 'YYYY-MM-DD'));
INSERT INTO PAYMENTS VALUES('C07', 'Opposing', 'Unpaid', 10890, NULL);
INSERT INTO PAYMENTS VALUES('C08', 'Client', 'Paid', 16700, TO_DATE('2023-08-01', 'YYYY-MM-DD'));
INSERT INTO PAYMENTS VALUES('A09', 'Client', 'Paid', 13500, TO_DATE('2023-08-14', 'YYYY-MM-DD'));
INSERT INTO PAYMENTS VALUES('B10', NULL, 'Unpaid', 18900, NULL);
INSERT INTO PAYMENTS VALUES('D11', 'Client', 'Unpaid', 6700, NULL);
INSERT INTO PAYMENTS VALUES('A12', 'Client', 'Paid', 5400, TO_DATE('2023-10-18', 'YYYY-MM-DD'));

```

```

INSERT INTO PAYMENTS VALUES('D13', 'Opposing', 'Unpaid', 23450, NULL);
INSERT INTO PAYMENTS VALUES('B14', 'Client', 'Unpaid', 9700, NULL);
INSERT INTO PAYMENTS VALUES('C15', 'Client', 'Paid', 12340, TO_DATE('2023-10-23', 'YYYY-MM-DD'));
INSERT INTO PAYMENTS VALUES('A16', 'Client', 'Unpaid', 13455, NULL);
INSERT INTO PAYMENTS VALUES('A17', 'Opposing', 'Paid', 15670, TO_DATE('2023-10-27', 'YYYY-MM-DD'));
INSERT INTO PAYMENTS VALUES('D18', NULL, 'Unpaid', 17890, NULL);
INSERT INTO PAYMENTS VALUES('C19', 'Client', 'Unpaid', 27800, NULL);
INSERT INTO PAYMENTS VALUES('B20', NULL, 'Unpaid', 5000, NULL);

```

```

CREATE TABLE Case (
    Case_ID CHAR(7) PRIMARY KEY,
    Client_ID CHAR(5),
    Lawyer_ID CHAR(6),
    Case_Date DATE,
    Closed_Date DATE NULL,
    Case_Status VARCHAR2(7) CONSTRAINT chk_Case_Status CHECK (Case_Status IN ('Closed', 'Ongoing')),
    Case_Results VARCHAR(8),
    PAYMENTS_ID CHAR(3),
    CONSTRAINT fk_Client FOREIGN KEY (Client_ID) REFERENCES Clients(Client_ID),
    CONSTRAINT fk_Lawyer FOREIGN KEY (Lawyer_ID) REFERENCES Lawyer(Lawyer_ID),
    CONSTRAINT fk_Payment FOREIGN KEY (PAYMENTS_ID) REFERENCES PAYMENTS(PAYMENTS_ID)
);

```

```

CREATE INDEX idx_Client_ID ON Case(Client_ID);

```

```

CREATE OR REPLACE TRIGGER trg_case_date
BEFORE INSERT OR UPDATE ON Case
FOR EACH ROW
BEGIN
    IF :new.Case_Date > SYSDATE THEN
        RAISE_APPLICATION_ERROR(-20001, 'Case date cannot be in the future');
    END IF;
END;
/

```

```

INSERT INTO Case VALUES('CG42801', 'A1001', 'LA1201', DATE'2023-04-05', DATE'2023-06-06', 'Closed', 'Won', 'A01');
INSERT INTO Case VALUES('CG42802', 'A1002', 'LA1202', DATE'2023-04-06', DATE'2023-06-07', 'Closed', 'Won', 'A02');
INSERT INTO Case VALUES('CG42803', 'A1003', 'LA1203', DATE'2023-04-11', DATE'2023-06-12', 'Closed', 'Won', 'B03');
INSERT INTO Case VALUES('CG42804', 'A1004', 'LA1204', DATE'2023-04-14', DATE'2023-06-15', 'Closed', 'Won', 'B04');
INSERT INTO Case VALUES('CG42805', 'A1005', 'LA1205', DATE'2023-04-19', NULL, 'Ongoing', 'Pending', 'C05');
INSERT INTO Case VALUES('CG42806', 'A1006', 'LA1206', DATE'2023-05-28', DATE'2023-07-29', 'Closed', 'Won', 'D06');
INSERT INTO Case VALUES('CG42807', 'A1007', 'LA1207', DATE'2023-05-29', DATE'2023-07-30', 'Closed', 'Won', 'C07');
INSERT INTO Case VALUES('CG42808', 'A1008', 'LA1208', DATE'2023-05-30', DATE'2023-07-31', 'Closed', 'Won', 'C08');
INSERT INTO Case VALUES('CG42809', 'A1009', 'LA1209', DATE'2023-06-03', DATE'2023-08-04', 'Closed', 'Lost', 'A09');

```



```

INSERT INTO Case VALUES('CG42810', 'A1010', 'LA1210', DATE'2023-06-16', NULL, 'Ongoing', 'Pending',
'B10');
INSERT INTO Case VALUES('CG42811', 'A1011', 'LA1211', DATE'2023-06-17', DATE'2023-08-18', 'Closed', 'Lost',
'D11');
INSERT INTO Case VALUES('CG42812', 'A1012', 'LA1208', DATE'2023-06-19', DATE'2023-08-20', 'Closed', 'Won',
'A12');
INSERT INTO Case VALUES('CG42813', 'A1013', 'LA1214', DATE'2023-07-15', DATE'2023-10-16', 'Closed', 'Won',
'D13');
INSERT INTO Case VALUES('CG42814', 'A1014', 'LA1205', DATE'2023-08-17', DATE'2023-10-18', 'Closed', 'Won',
'B14');
INSERT INTO Case VALUES('CG42815', 'A1015', 'LA1212', DATE'2023-08-19', DATE'2023-10-20', 'Closed', 'Won',
'C15');
INSERT INTO Case VALUES('CG42816', 'A1004', 'LA1204', DATE'2023-08-20', DATE'2023-10-21', 'Closed', 'Lost',
'A16');
INSERT INTO Case VALUES('CG42817', 'A1006', 'LA1215', DATE'2023-08-25', DATE'2023-10-26', 'Closed', 'Won',
'A17');
INSERT INTO Case VALUES('CG42818', 'A1006', 'LA1208', DATE'2023-09-06', NULL, 'Ongoing', 'Pending',
'D18');
INSERT INTO Case VALUES('CG42819', 'A1009', 'LA1210', DATE'2023-09-10', DATE'2023-04-06', 'Closed', 'Won',
'C19');
INSERT INTO Case VALUES('CG42820', 'A1014', 'LA1213', DATE'2023-10-27', NULL, 'Ongoing', 'Pending', 'B20');

```

```

CREATE TABLE court(
    Court_ID NUMBER(3, 0) PRIMARY KEY,
    class_type CHAR(1) CHECK (class_type IN ('A', 'B', 'C')),
    court_location CHAR(5)
);

```

```

INSERT INTO court VALUES ('1','A','R1');
INSERT INTO court VALUES ('2','A','R2');
INSERT INTO court VALUES ('3','A','R3');
INSERT INTO court VALUES ('4','A','R4');
INSERT INTO court VALUES ('5','A','R5');
INSERT INTO court VALUES ('6','B','R6');
INSERT INTO court VALUES ('7','B','R7');
INSERT INTO court VALUES ('8','B','R8');
INSERT INTO court VALUES ('9','B','R9');
INSERT INTO court VALUES ('10','B','R10');
INSERT INTO court VALUES ('11','C','R11');
INSERT INTO court VALUES ('12','C','R12');
INSERT INTO court VALUES ('13','C','R13');
INSERT INTO court VALUES ('14','C','R14');
INSERT INTO court VALUES ('15','C','R15');

```

```

CREATE TABLE feedback (
    feedback_ID CHAR(8) PRIMARY KEY,
    feedback_Date DATE,
    Case_ID CHAR(7),
    Client_ID CHAR(5),
    Lawyer_ID CHAR(6),
    Overall_Satisfaction NUMBER(1) CHECK (Overall_Satisfaction BETWEEN 1 AND 5),
    FOREIGN KEY (Client_ID) REFERENCES Clients(Client_ID),
    FOREIGN KEY (Lawyer_ID) REFERENCES Lawyer(Lawyer_ID),

```

```
FOREIGN KEY (Case_ID) REFERENCES Case(Case_ID)
);
```

```
INSERT INTO feedback VALUES ( 'FB1000A', DATE '2023-06-08', 'CG42801', 'A1001', 'LA1201', 3);
INSERT INTO feedback VALUES ( 'FB1001A', DATE '2023-06-09', 'CG42802', 'A1002', 'LA1202', 5);
INSERT INTO feedback VALUES ( 'FB1002A', DATE '2023-06-15', 'CG42803', 'A1003', 'LA1203', 4);
INSERT INTO feedback VALUES ( 'FB1003A', DATE '2023-06-20', 'CG42804', 'A1004', 'LA1204', 3);
INSERT INTO feedback VALUES ( 'FB1005A', DATE '2023-07-29', 'CG42806', 'A1006', 'LA1206', 3);
INSERT INTO feedback VALUES ( 'FB1006A', DATE '2023-07-30', 'CG42807', 'A1007', 'LA1207', 4);
INSERT INTO feedback VALUES ( 'FB1007A', DATE '2023-07-31', 'CG42808', 'A1008', 'LA1208', 5);
INSERT INTO feedback VALUES ( 'FB1008A', DATE '2023-08-04', 'CG42809', 'A1009', 'LA1209', 2);
INSERT INTO feedback VALUES ( 'FB1010A', DATE '2023-08-18', 'CG42811', 'A1011', 'LA1211', 2);
INSERT INTO feedback VALUES ( 'FB1011A', DATE '2023-08-20', 'CG42812', 'A1012', 'LA1208', 3);
INSERT INTO feedback VALUES ( 'FB1012A', DATE '2023-10-16', 'CG42813', 'A1013', 'LA1208', 5);
INSERT INTO feedback VALUES ( 'FB1013A', DATE '2023-10-18', 'CG42814', 'A1014', 'LA1205', 4);
INSERT INTO feedback VALUES ( 'FB1014A', DATE '2023-10-20', 'CG42815', 'A1015', 'LA1202', 3);
INSERT INTO feedback VALUES ( 'FB1015A', DATE '2023-10-21', 'CG42816', 'A1004', 'LA1204', 5);
INSERT INTO feedback VALUES ( 'FB1016A', DATE '2023-10-26', 'CG42817', 'A1006', 'LA1207', 3);
INSERT INTO feedback VALUES ( 'FB1018A', DATE '2023-12-11', 'CG42819', 'A1009', 'LA1210', 1);
```

```
CREATE TABLE code_of_law (
    Law_ID CHAR(5) PRIMARY KEY,
    Violation VARCHAR2(50),
    Description CLOB,
    Penalty VARCHAR2(50)
);
```

```
INSERT INTO code_of_law VALUES ('01B', 'Murder', 'Committing murder with malicious intent', 'life imprisonment');
INSERT INTO code_of_law VALUES ('02C', 'Poisoning', 'Causing death through poisoning', 'life imprisonment');
INSERT INTO code_of_law VALUES ('03A', 'Manslaughter', 'Unintentional killing of another person', 'Fine and community service');
INSERT INTO code_of_law VALUES ('04B', 'Terrorism', 'Use of violence for political purposes', 'Death');
INSERT INTO code_of_law VALUES ('05A', 'Robbery', 'Committing robbery with violence or threat', 'Sentence to jail 30 years');
INSERT INTO code_of_law VALUES ('06C', 'Burglary', 'Illegal entry into a building with the intent to commit a crime', 'Sentence to jail 10 years');
INSERT INTO code_of_law VALUES ('07B', 'Embezzlement', 'Misappropriation of funds entrusted to one care', 'Sentence to jail 8 years');
INSERT INTO code_of_law VALUES ('08A', 'Shoplifting', 'Stealing goods from a store', 'Fine and community service');
INSERT INTO code_of_law VALUES ('09B', 'Car Theft', 'Stealing a motor vehicle', 'Sentence to jail 5 years');
INSERT INTO code_of_law VALUES ('10C', 'Identity Theft', 'Unauthorized use of someone else\'s identity', 'Sentence to jail 3 years');
INSERT INTO code_of_law VALUES ('11B', 'Grand Theft Auto', 'Theft of a motor vehicle with intent to permanently deprive the owner', 'Sentence to jail 5 years');
INSERT INTO code_of_law VALUES ('12A', 'Child Exploitation', 'Sexual exploitation of children', 'Death');
INSERT INTO code_of_law VALUES ('13C', 'Sexual Assault', 'Sexual assault or abuse, particularly against children', 'Death');
INSERT INTO code_of_law VALUES ('14A', 'Rape', 'Forced sexual intercourse without consent', 'Sentence to jail 2 years');
INSERT INTO code_of_law VALUES ('15C', 'Sexual Harassment', 'Unwanted sexual advances or comments', 'Fine and community service');
```

```

CREATE TABLE Trial (
    Trial_ID CHAR(8) PRIMARY KEY,
    Trial_Date DATE,
    Trial_Status VARCHAR2(10),
    Court_ID NUMBER(3, 0),
    Case_ID CHAR(7),
    Client_ID CHAR(5),
    Lawyer_ID CHAR(6),
    Law_ID CHAR(5),

    FOREIGN KEY (Court_ID) REFERENCES court(Court_ID),
    FOREIGN KEY (Case_ID) REFERENCES Case(Case_ID),
    FOREIGN KEY (Client_ID) REFERENCES Clients(Client_ID),
    FOREIGN KEY (Lawyer_ID) REFERENCES Lawyer(Lawyer_ID),
    FOREIGN KEY (Law_ID) REFERENCES code_of_law(Law_ID)
);

CREATE OR REPLACE TRIGGER trg_trial_date
BEFORE INSERT OR UPDATE ON Trial
FOR EACH ROW
BEGIN
    IF :new.Trial_Date > SYSDATE THEN
        RAISE_APPLICATION_ERROR(-20003, 'Trial date cannot be in the future');
    END IF;
END;
/

INSERT INTO Trial VALUES ('TRI50010', DATE '2023-05-01', 'Win', '1', 'CG42801', 'A1001', 'LA1201', '01B');
INSERT INTO Trial VALUES ('TRI50011', DATE '2023-05-02', 'Win', '2', 'CG42802', 'A1002', 'LA1202', '07B');
INSERT INTO Trial VALUES ('TRI50012', DATE '2023-05-07', 'Win', '9', 'CG42803', 'A1003', 'LA1203', '14A');
INSERT INTO Trial VALUES ('TRI50013', DATE '2023-05-10', 'Win', '6', 'CG42804', 'A1004', 'LA1204', '09B');
INSERT INTO Trial VALUES ('TRI50014', DATE '2023-05-15', 'Lost', '4', 'CG42805', 'A1005', 'LA1205', '02C');
INSERT INTO Trial VALUES ('TRI50015', DATE '2023-05-15', 'Lost', '13', 'CG42805', 'A1005', 'LA1205', '15C');
INSERT INTO Trial VALUES ('TRI50016', DATE '2023-07-15', 'Pending', '7', 'CG42805', 'A1005', 'LA1205', '11B');
INSERT INTO Trial VALUES ('TRI50017', DATE '2023-06-20', 'Win', '6', 'CG42806', 'A1006', 'LA1206', '08A');
INSERT INTO Trial VALUES ('TRI50018', DATE '2023-06-21', 'Win', '3', 'CG42807', 'A1007', 'LA1207', '03A');
INSERT INTO Trial VALUES ('TRI50019', DATE '2023-06-22', 'Win', '8', 'CG42808', 'A1008', 'LA1208', '09B');
INSERT INTO Trial VALUES ('TRI50020', DATE '2023-07-01', 'Lost', '11', 'CG42809', 'A1009', 'LA1209', '13C');
INSERT INTO Trial VALUES ('TRI50021', DATE '2023-07-14', 'Pending', '5', 'CG42810', 'A1010', 'LA1210', '03A');
INSERT INTO Trial VALUES ('TRI50022', DATE '2023-07-16', 'Lost', '7', 'CG42811', 'A1011', 'LA1211', '05A');
INSERT INTO Trial VALUES ('TRI50023', DATE '2023-07-17', 'Win', '8', 'CG42812', 'A1012', 'LA1208', '08A');
INSERT INTO Trial VALUES ('TRI50024', DATE '2023-08-18', 'Lost', '10', 'CG42813', 'A1013', 'LA1214', '05A');
INSERT INTO Trial VALUES ('TRI50025', DATE '2023-09-18', 'Win', '6', 'CG42813', 'A1013', 'LA1214', '08A');
INSERT INTO Trial VALUES ('TRI50026', DATE '2023-09-19', 'Win', '1', 'CG42814', 'A1014', 'LA1205', '04B');
INSERT INTO Trial VALUES ('TRI50027', DATE '2023-09-21', 'Win', '3', 'CG42815', 'A1015', 'LA1212', '02C');
INSERT INTO Trial VALUES ('TRI50028', DATE '2023-09-23', 'Lost', '10', 'CG42816', 'A1004', 'LA1204', '05A');
INSERT INTO Trial VALUES ('TRI50029', DATE '2023-09-27', 'Win', '14', 'CG42817', 'A1006', 'LA1215', '12A');
INSERT INTO Trial VALUES ('TRI50030', DATE '2023-09-15', 'Lost', '2', 'CG42818', 'A1006', 'LA1208', '03A');
INSERT INTO Trial VALUES ('TRI50031', DATE '2023-10-15', 'Lost', '1', 'CG42818', 'A1006', 'LA1208', '03A');
INSERT INTO Trial VALUES ('TRI50032', DATE '2023-11-05', 'Lost', '1', 'CG42818', 'A1006', 'LA1208', '03A');
INSERT INTO Trial VALUES ('TRI50033', DATE '2023-11-25', 'Lost', '4', 'CG42818', 'A1006', 'LA1208', '03A');
INSERT INTO Trial VALUES ('TRI50034', DATE '2023-12-09', 'Pending', '3', 'CG42818', 'A1006', 'LA1208', '03A');
INSERT INTO Trial VALUES ('TRI50035', DATE '2023-10-12', 'Win', '7', 'CG42819', 'A1009', 'LA1210', '06C');

```

```

INSERT INTO Trial VALUES ('TRI50036', DATE '2023-11-12', 'Win', '9', 'CG42819', 'A1009', 'LA1210','10C');
INSERT INTO Trial VALUES ('TRI50037', DATE '2023-11-25', 'Pending', '15','CG42820','A1014','LA1213','15C');

CREATE TABLE JUDGE_ASSIGNED (
  Judge_ID NUMBER(6),
  Trial_ID CHAR(8),
  PRIMARY KEY (Judge_ID, Trial_ID),
  FOREIGN KEY (Judge_ID) REFERENCES judges(Judge_ID),
  FOREIGN KEY (Trial_ID) REFERENCES Trial(Trial_ID)
);

INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230160', 'TRI50010');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230161', 'TRI50010');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230162', 'TRI50010');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230163', 'TRI50011');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230164', 'TRI50011');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230165', 'TRI50011');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230166', 'TRI50012');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230167', 'TRI50012');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230168', 'TRI50012');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230169', 'TRI50013');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230170', 'TRI50013');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230173', 'TRI50013');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230171', 'TRI50014');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230172', 'TRI50014');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230173', 'TRI50014');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230174', 'TRI50015');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230160', 'TRI50015');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230161', 'TRI50015');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230162', 'TRI50016');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230163', 'TRI50016');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230164', 'TRI50016');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230165', 'TRI50017');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230166', 'TRI50017');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230167', 'TRI50017');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230168', 'TRI50018');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230169', 'TRI50018');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230170', 'TRI50018');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230171', 'TRI50019');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230172', 'TRI50019');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230173', 'TRI50019');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230174', 'TRI50020');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230160', 'TRI50020');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230161', 'TRI50020');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230162', 'TRI50021');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230163', 'TRI50021');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230164', 'TRI50021');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230165', 'TRI50022');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230166', 'TRI50022');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230167', 'TRI50022');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230168', 'TRI50023');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230169', 'TRI50023');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230170', 'TRI50023');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230171', 'TRI50024');

```

```

INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230172', 'TRI50024');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230173', 'TRI50024');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230174', 'TRI50025');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230160', 'TRI50025');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230161', 'TRI50025');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230162', 'TRI50026');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230163', 'TRI50026');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230164', 'TRI50026');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230165', 'TRI50027');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230166', 'TRI50027');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230167', 'TRI50027');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230168', 'TRI50028');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230169', 'TRI50028');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230170', 'TRI50028');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230171', 'TRI50029');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230172', 'TRI50029');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230173', 'TRI50029');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230174', 'TRI50030');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230160', 'TRI50030');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230161', 'TRI50030');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230162', 'TRI50031');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230163', 'TRI50031');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230164', 'TRI50031');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230165', 'TRI50032');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230166', 'TRI50032');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230167', 'TRI50032');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230168', 'TRI50033');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230169', 'TRI50033');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230170', 'TRI50033');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230171', 'TRI50034');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230172', 'TRI50034');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230173', 'TRI50034');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230174', 'TRI50035');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230160', 'TRI50035');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230161', 'TRI50035');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230162', 'TRI50036');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230163', 'TRI50036');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230164', 'TRI50036');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230165', 'TRI50037');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230166', 'TRI50037');
INSERT INTO JUDGE_ASSIGNED (Judge_ID, Trial_ID) VALUES ('230167', 'TRI50037');

```

```

CREATE TABLE FIELD_OF_EXPERTISE (
    Field_ID NUMBER(2, 0) PRIMARY KEY CHECK (Field_ID > 0),
    Field_Name VARCHAR2(255) NOT NULL,
    Field_Description CLOB
);
INSERT INTO FIELD_OF_EXPERTISE VALUES (1, 'Criminal Law - Murder', 'Deals with offenses involving homicide.');
```

```

INSERT INTO FIELD_OF_EXPERTISE VALUES (2, 'Criminal Law - Rape', 'Deals with offenses involving sexual assault.');
```

```

INSERT INTO FIELD_OF_EXPERTISE VALUES (3, 'Criminal Law - Kidnapping', 'Deals with offenses involving unlawful abduction or detention of individuals.');
```

```

INSERT INTO FIELD_OF_EXPERTISE VALUES (4, 'Criminal Law - Armed Robbery', 'Deals with offenses involving theft with the use of weapons.');
```

```

INSERT INTO FIELD_OF_EXPERTISE VALUES (5, 'Criminal Law - Carjacking', 'Deals with offenses involving the theft of a vehicle by force.');
```

```

INSERT INTO FIELD_OF_EXPERTISE VALUES (6, 'Criminal Law - Attempted Murder', 'Deals with offenses involving the intentional attempt to cause another person/'s death.');
```

```

INSERT INTO FIELD_OF_EXPERTISE VALUES (7, 'Criminal Law - Armed House Invasion', 'Deals with offenses involving entering a residence with the use of weapons.');
```

```

INSERT INTO FIELD_OF_EXPERTISE VALUES (8, 'Criminal Law - Burglary', 'Deals with offenses involving unauthorized entry into a building with the intent to commit a crime.');
```

```

INSERT INTO FIELD_OF_EXPERTISE VALUES (9, 'Criminal Law - White-Collar Crime', 'Deals with non-violent, financially motivated crimes often committed by business professionals or government officials.');
```

```

INSERT INTO FIELD_OF_EXPERTISE VALUES (10, 'Criminal Law - Cybercrime', 'Deals with offenses related to computer networks, data, and information systems.');
```

```

CREATE TABLE LAWYER_FIELD_EXPERTISE (
    Lawyer_ID CHAR(6),
    Field_ID NUMBER(2, 0),
    PRIMARY KEY (Lawyer_ID, Field_ID),
    FOREIGN KEY (Lawyer_ID) REFERENCES Lawyer(Lawyer_ID),
    FOREIGN KEY (Field_ID) REFERENCES FIELD_OF_EXPERTISE(Field_ID)
);
```


```

INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1201', 1);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1202', 2);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1203', 3);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1204', 4);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1205', 5);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1206', 6);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1207', 7);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1208', 8);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1209', 9);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1210', 10);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1201', 2);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1208', 3);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1205', 4);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1202', 1);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1203', 2);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1204', 3);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1206', 4);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1207', 5);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1209', 6);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1210', 7);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1201', 8);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1202', 9);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1203', 4);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1211', 1);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1212', 6);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1213', 5);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1214', 4);
INSERT INTO LAWYER_FIELD_EXPERTISE (Lawyer_ID, Field_ID) VALUES ('LA1215', 1);
```

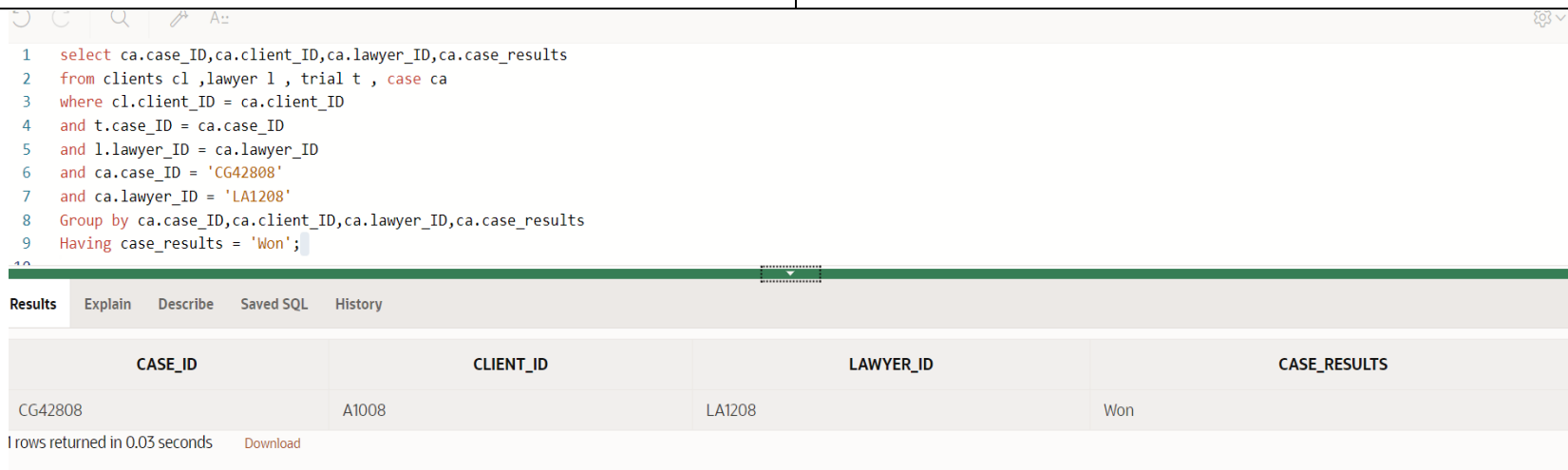
iii) Code for specific views

Part 4 (Question)	Code	Justification
c	<pre>CREATE VIEW CaseAndPayment AS SELECT c.Case_ID, c.Case_Date, c.Client_ID, c.Case_Status, c.Case_Results, p.PAYMENTS_ID, p.PAYMENTS_amt, p.PAYMENTS_stat FROM Case c RIGHT JOIN PAYMENTS p ON c.PAYMENTS_ID = p.PAYMENTS_ID</pre>	<p>The "CaseAndPayment" view is designed to merge data from the "Case" and "PAYMENTS" tables through a RIGHT JOIN on the shared field "PAYMENTS_ID." This view combines essential information, including case ID, date, client ID, status, and results from the "Case" table, along with payment ID, amount, and status from the "PAYMENTS" table, ensuring a comprehensive representation of cases and their associated payments.</p>
d	<pre>CREATE VIEW LawyerSatisfaction AS SELECT Lawyer.Lawyer_ID, Lawyer.Lawyer_Name, feedback.Overall_Satisfaction FROM Lawyer INNER JOIN feedback ON Lawyer.Lawyer_ID = feedback.Lawyer_ID;</pre>	<p>The "LawyerSatisfaction" view is created to consolidate crucial data, combining lawyer details from the "Lawyer" table with overall satisfaction feedback from the "feedback" table through an INNER JOIN on the common "Lawyer_ID." This streamlined view provides a concise and accessible summary of lawyer performance and satisfaction, facilitating efficient decision-making and analysis within the legal context.</p>
e	<pre>CREATE VIEW Lawyer_Stats AS SELECT I.Lawyer_ID, I.Lawyer_Name, I.Years_Of_Service, COUNT(CASE WHEN ca.Case_Results = 'Won' THEN ca.Case_ID END) AS Cases_Won, COUNT(ca.Case_ID) AS Total_Cases FROM Lawyer I LEFT JOIN Case ca ON I.Lawyer_ID = ca.Lawyer_ID GROUP BY I.Lawyer_ID, I.Lawyer_Name, I.Years_Of_Service;</pre>	<p>The 'Lawyer_Stats' view shows essential details of lawyers, encompassing information such as the count of cases won ('Cases_Won') and the total number of cases handled ('Total_Cases'). This consolidation allows for a comprehensive overview of individual lawyers' performance metrics within the legal practice.</p>

Part 4: Query a database (each sub-part carries 5 marks; max of 25 marks)

No	Query Description								
a)	<p>The scenario fetches the distinct client IDs and client names who have created a case within the specified date range ('2023-05-01' to '2023-06-01') and have a case result of 'Won'. The MONTHS_BETWEEN function is used to ensure that the case creation dates fall within 2023-05-01 to 2023-06-01.</p> <pre> 1 SELECT DISTINCT c.Client_ID, c.Client_Name 2 FROM Clients c 3 JOIN Case ca ON c.Client_ID = ca.Client_ID 4 WHERE ca.Case_Date BETWEEN DATE'2023-05-01' AND DATE'2023-06-01' 5 AND ca.Case_Results = 'Won' 6 AND MONTHS_BETWEEN(ca.Case_Date, DATE'2023-05-01') >= 0 7 AND MONTHS_BETWEEN(ca.Case_Date, DATE'2023-06-01') <= 0; 8 </pre>  <p>The screenshot shows a database query results interface. At the top, there are tabs: Results, Explain, Describe, Saved SQL, and History. The Results tab is selected. Below the tabs is a table with two columns: CLIENT_ID and CLIENT_NAME. The table contains three rows of data:</p> <table border="1"> <thead> <tr> <th>CLIENT_ID</th> <th>CLIENT_NAME</th> </tr> </thead> <tbody> <tr> <td>A1006</td> <td>Will Wong</td> </tr> <tr> <td>A1007</td> <td>Chong York Ching</td> </tr> <tr> <td>A1008</td> <td>Cheong Chyi Bin</td> </tr> </tbody> </table>	CLIENT_ID	CLIENT_NAME	A1006	Will Wong	A1007	Chong York Ching	A1008	Cheong Chyi Bin
CLIENT_ID	CLIENT_NAME								
A1006	Will Wong								
A1007	Chong York Ching								
A1008	Cheong Chyi Bin								
b)	<p>A request has been made by an employee at Sunny Legal Firm for a report containing details of a client case. The</p>								

primary focus of this report is on the case with the identifier “CG42808”, Client_ID and the assigned lawyer ‘LA1208’. The report should be sorted based on the case results, with a preference for cases marked as ‘won.’



The screenshot shows a SQL query in a text editor with a toolbar at the top. The query is as follows:

```

1 select ca.case_ID,ca.client_ID,ca.lawyer_ID,ca.case_results
2 from clients cl ,lawyer l , trial t , case ca
3 where cl.client_ID = ca.client_ID
4 and t.case_ID = ca.case_ID
5 and l.lawyer_ID = ca.lawyer_ID
6 and ca.case_ID = 'CG42808'
7 and ca.lawyer_ID = 'LA1208'
8 Group by ca.case_ID,ca.client_ID,ca.lawyer_ID,ca.case_results
9 Having case_results = 'Won';

```

Below the query editor, there is a tabbed interface with 'Results' selected. It displays a table with the following data:

CASE_ID	CLIENT_ID	LAWYER_ID	CASE_RESULTS
CG42808	A1008	LA1208	Won

At the bottom of the results section, it says '1 rows returned in 0.03 seconds' and has a 'Download' link.

c)

A request has been made by an employee at Sunny Legal Firm for a report containing details of a client. The targeted case’s result is lost, and the payment’s status is unpaid. The employee could only remember that the client stays in Selangor. The focus is on retrieving the client’s contact number. The report should be sorted based on the case’s result as lost, payment’s status as unpaid, and the word Selangor in the client’s address.

<div> <div> <div>↶</div> <div>↷</div> <div>🔍</div> <div>🔗</div> <div>A::</div> </div> <div>⚙️ ✓</div> </div> <pre> 1 select cp.Case_ID,cp.Case_Status,cp.Case_Results,cp.PAYMENTS_ID,cp.PAYMENTS_amt, cp.PAYMENTS_stat,cl.* 2 from CaseAndPayment cp 3 RIGHT OUTER JOIN Clients cl on cp.Client_ID = cl.Client_ID 4 WHERE cp.Case_Results = 'Lost' 5 AND cp.PAYMENTS_stat ='Unpaid' 6 AND cl.Client_Address LIKE '%Selangor%'; 7 </pre> <div> <div>Results</div> <div>Explain</div> <div>Describe</div> <div>Saved SQL</div> <div>History</div> </div> <table> <tr> <th>CASE_ID</th><th>CASE_STATUS</th><th>CASE_RESULTS</th><th>PAYMENTS_ID</th><th>PAYMENTS_AMT</th><th>PAYMENTS_STAT</th><th>CLIENT_ID</th><th>CLIENT_NAME</th><th>CLIENT_ADDRESS</th><th>CLIENT_CONTACT_NUMBER</th></tr> <tr> <td>CG42816</td><td>Closed</td><td>Lost</td><td>A16</td><td>13455</td><td>Unpaid</td><td>A1004</td><td>Farhana Zikri</td><td>11,Jalan P 2/18,Seksyen 2,Bandar Teknologi,43500 Kajang,Selangor.</td><td>0190102345</td></tr> </table>										CASE_ID	CASE_STATUS	CASE_RESULTS	PAYMENTS_ID	PAYMENTS_AMT	PAYMENTS_STAT	CLIENT_ID	CLIENT_NAME	CLIENT_ADDRESS	CLIENT_CONTACT_NUMBER	CG42816	Closed	Lost	A16	13455	Unpaid	A1004	Farhana Zikri	11,Jalan P 2/18,Seksyen 2,Bandar Teknologi,43500 Kajang,Selangor.	0190102345
CASE_ID	CASE_STATUS	CASE_RESULTS	PAYMENTS_ID	PAYMENTS_AMT	PAYMENTS_STAT	CLIENT_ID	CLIENT_NAME	CLIENT_ADDRESS	CLIENT_CONTACT_NUMBER																				
CG42816	Closed	Lost	A16	13455	Unpaid	A1004	Farhana Zikri	11,Jalan P 2/18,Seksyen 2,Bandar Teknologi,43500 Kajang,Selangor.	0190102345																				

d)	<p>Sunway Legal Firm is keen on identifying highly satisfactory lawyers based on client feedback to reward and acknowledge their exemplary performance. To accomplish this, the firm wants to filter lawyers who have received outstanding overall satisfaction ratings of 4 or more from clients.</p>
----	--

```

1 SELECT Lawyer_ID, Lawyer_Name, Overall_Satisfaction
2 FROM LawyerSatisfaction
3 WHERE Overall_Satisfaction >= 4
4
5 MINUS
6
7 SELECT Lawyer_ID, Lawyer_Name, Overall_Satisfaction
8 FROM LawyerSatisfaction
9 WHERE Overall_Satisfaction < 4;

```

Results Explain Describe Saved SQL History

LAWYER_ID	LAWYER_NAME	OVERALL_SATISFACTION
LA1202	Chong Xuan Ni	5
LA1203	Lim Man Ting	4
LA1204	John Chin	5
LA1205	Carmen Lim	4
LA1207	Wong Man Khei	4
LA1208	Sam Chong	5

e)

Provide a list of exceptional lawyers who have achieved the highest number of cases won. Include their years of service and the total number of customers they have represented (both won and lost).

```
1 SELECT *
2 FROM (
3     SELECT *
4     FROM Lawyer_Stats
5     ORDER BY Cases_Won DESC
6 )
7 WHERE ROWNUM = 1;
```

Results Explain Describe Saved SQL History				
LAWYER_ID	LAWYER_NAME	YEARS_OF_SERVICE	CASES_WON	TOTAL_CASES
LA1208	Sam Chong	2 years 3 months	2	3

1 rows returned in 0.02 seconds [Download](#)

Part 5: Teamwork and Presentation (10 marks)

No	ID	Name	Questions to present
a)	22017503	Goh Ci Yun	Run batch script, explain table. (client table- court table, alternate keys are expected to be identified)
b)	22035455	Lam Chee Hiew	Continue explain the table (code_of_law – lawyer_field_expertise)
c)	22025670	Ryan Ng Xu Yang	Run specified view table code and explain
d)	23026610	Pu Xinyi	Run Part 4 SQL Codes for scenario a and b, and explain
e)	21099403	Wayne Kan Kah Weng	Run Part 4 SQL Codes for scenario c, d, and e, and explain