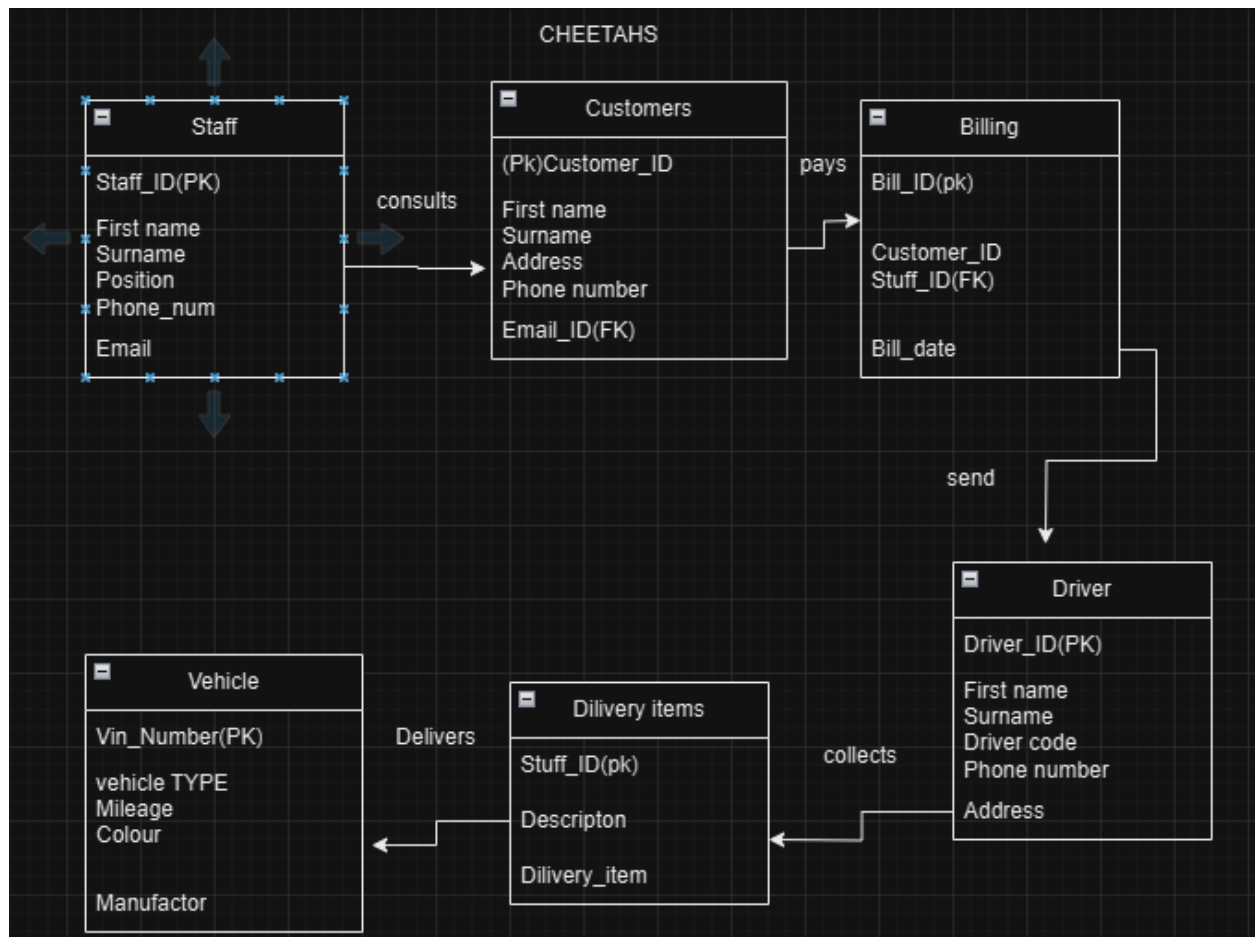


ST10083732

ADVANCED DATABASE PART1

QUESTION 1



QUESTION 2

Oracle SQL Developer: Table SYSTEM.CUSTOMERS1@Admin

File Edit View Navigate Run Team Tools Window Help

Connections

- Admin.sql
- POE_PART1.sql
- Admin
- CUSTOMERS1

Columns Data Model Constraints Grants Statistics Triggers Flashback Dependencies Details Partitions Indexes SQL

Sort: Filter:

CUSTOMER_ID	FIRST_NAME	SURNAME	ADDRESS	PHONE_NUM	EMAIL
1	11011	Bob Smith	18 Water rd	0877727521	bob@isat.com
2	11012	Sam Hendricks	22 Water rd	0836257857	shen@com.co.za
3	11013	Larry Clark	101 Summer lane	0834567891	larc@com.co.za
4	11014	Jeff Jones	35 Mountain way	0612547895	jeff@isat.com
5	11015	Andre Kerk	5 Main rd	0877727521	ak@mc.com.co
6	11016	Wayne Smith	13 Water rd	0877727521	wsb@isat.com
7	11017	John Hendricks	29 Water rd	0836257857	jhen@com.co.za
8	11018	Sally Clark	101 Summer lane	0834567892	sallye@com.co.za
9	11019	Bridget Bitterhour	125 Mountain way	0612547896	bk@isat.com
10	11110	Nicole Kerk	175 Mountain way	0834567896	nic@mc.com.co
11	11111	Catherine Smith	13 Water rd	0877727521	cat@isat.com
12	11112	Mel Hendricks	29 Water rd	0836257857	melh@com.co.za
13	11113	Josh Maverick	15 Water rd	0612547897	joshm@isat.com
14	11114	Lucy Du Plessis	221 Summer rd	0876727851	ldup@com.co.za
15	11116	Mel Jones	110 Summer lane	0834567897	melj@com.co.za
16	11117	Stuart Maverick	35 Main rd	0827385281	sjones@mc.al.co.za

Reports

- All Reports
- Analytic View Reports
- Data Dictionary Reports
- Data Modeler Reports
- OLAP Reports
- TimesTen Reports
- User Defined Reports

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Oracle SQL Developer

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Connections

- Admin.sql
- POE_PART1.sql
- Admin
- DELIVERY_ITEMS

Columns Data Model Constraints Grants Statistics Triggers Flashback Dependencies Details Partitions Indexes SQL

Sort: Filter:

DELIVERY_ITEM	DESCRIPTION	STAFF_ID
1	71011 House relocation	51011
2	71012 Delivery of specialized consignments	51017
3	71013 Delivery of specialized consignments	51015
4	71014 Office relocation	51012
5	71015 Delivery of specialized consignments	51014

Reports

- All Reports
- Analytic View Reports
- Data Dictionary Reports
- Data Modeler Reports
- OLAP Reports
- TimesTen Reports
- User Defined Reports

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Connections

- SQL_QUEUE_TABLES
- SQL_QUEUE
- SQL_SCHEDULES
- BILLING
- BROKER
- COURSES
- CUSTOMER
- CUSTOMERS
- CUSTOMERS1
- DELIVERY_ITEMS
- DRIVER_DELIVERIES
- DRIVERS
- DRIVER_ID
- FIRST_NAME

Reports

- All Reports
- Analytic View Reports
- Data Dictionary Reports
- Data Modeler Reports
- OLAP Reports
- TimesTen Reports
- User Defined Reports

Admin.sql POE_PART1.sql Admin DRIVERS

Columns Data Model Constraints Grants Statistics Triggers Flashback Dependencies Details Partitions Indexes SQL

DRIVER_ID FIRST_NAME SURNAME DRIVER_CODE PHONE_NUM ADDRESS

1	81011	Butheieri	Marshall	C1	0725698547	18 Leopard creek
2	81012	Tina	Mzari	C	0636984178	12 Caperd rd
3	81013	Jono	Mvuyisi	EC1	072648965	15 Caperd lane
4	81014	Richard	Smith	C1	0623116598	18 Beach rd
5	81015	Brett	Smith	EB	0883521457	55 Summer lane

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Oracle SQL Developer

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Connections

- ROLLINGSTATUS
- SCHEDULER_JOB_ARGS_TBL
- SCHEDULER_PROGRAM_ARGS_TBL
- SQLPLUS_PRODUCT_PROFILE
- STAFF
- STAFF_ID
- FIRST_NAME
- SURNAME
- POSITION
- PHONE_NUM
- ADDRESS
- EMAIL
- TRAILER_ACTIONS
- EMAIL
- VEHICLES

Reports

- All Reports
- Analytic View Reports
- Data Dictionary Reports
- Data Modeler Reports
- OLAP Reports
- TimesTen Reports
- User Defined Reports

Admin.sql POE_PART1.sql Admin STAFF

Columns Data Model Constraints Grants Statistics Triggers Flashback Dependencies Details Partitions Indexes SQL

STAFF_ID FIRST_NAME SURNAME POSITION PHONE_NUM ADDRESS EMAIL

1	81011	Sally	Du Toit	Logistics	0825698547	18 Main rd	scutiset.com
2	81012	Mark	Wright	CRM	0836984178	12 Cape Way	mwright@isat.com
3	81013	Harry	Sheen	Logistics	0725648965	15 Water Street	hsheen@isat.com
4	81014	Jabu	Xolani	Logistics	0823116598	18 White Lane	jxo@isat.com
5	81015	Roberto	Henry	Packaging	0783521451	55 Cape Street	rhenry@isat.com
6	81016	Pat	Durant	Logistics	0825698542	1 Main rd	pd@isat.com
7	81017	Steve	Maritz	CRM	0836984173	2 Cape Way	sm@isat.com
8	81018	Maxwell	Dube	Logistics	0725648964	5 Water Street	max@isat.com
9	81019	Shane	Hane	Logistics	0823116595	8 White Lane	smane@isat.com
10	81111	Bob	Truth	Packaging	0783521456	12 Cape Street	btruth@isat.com

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Oracle SQL Developer

File Edit View Navigate Run Team Tools Window Help

Connections

- ROLLINGSTATUS
- SCHEDULER_JOB_ARGS_TBL
- SCHEDULER_PROGRAM_ARGS_TBL
- SQLPLUS_PRODUCT_PROFILE
- STAFF
- TRANSACTIONS
- VEHICLES**
 - VIN_NUMBER
 - VEHICLE_TYPE
 - MILEAGE
 - COLOR
 - MANUFACTURER
- Views
- Indexes

Reports

- All Reports
- Analytic View Reports
- Data Dictionary Reports
- Data Modeler Reports
- OLAP Reports
- TimesTen Reports
- User Defined Reports

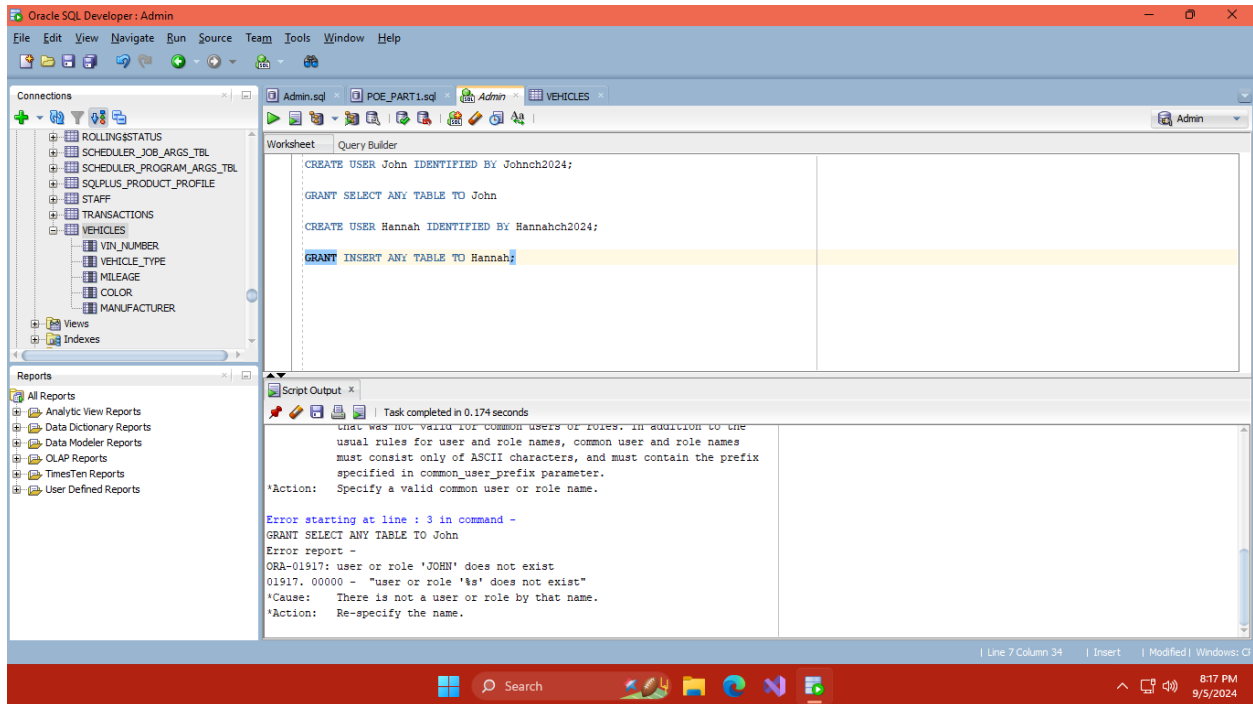
Admin.sql POE_PART1.sql Admin VEHICLES

Columns Data Model Constraints Grants Statistics Triggers Flashback Dependencies Details Partitions Indexes SQL

Sort: Filter: Actions...

	VIN_NUMBER	VEHICLE_TYPE	MILEAGE	COLOR	MANUFACTURER
1	12A558541	Cutaway van chassis	115352	RED	MAN
2	12A51858542	Flatbed truck	315356	BLUE	ISUZU
3	12A35858543	Medium Standard Truck	789587	SILVER	MAN
4	12A15851545	Flatbed truck	555050	WHITE	TATA
5	12A35868540	Cutaway van chassis	79058	WHITE	ISUZU
6	12A65858541	Cutaway van chassis	215856	RED	ISUZU
7	12A65858543	Flatbed truck	215856	BLUE	MAN

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3.2. The importance of separation of duties for different users includes:

Purposeful monetary error.

Lessening irreconcilable circumstances and unapproved exercises.

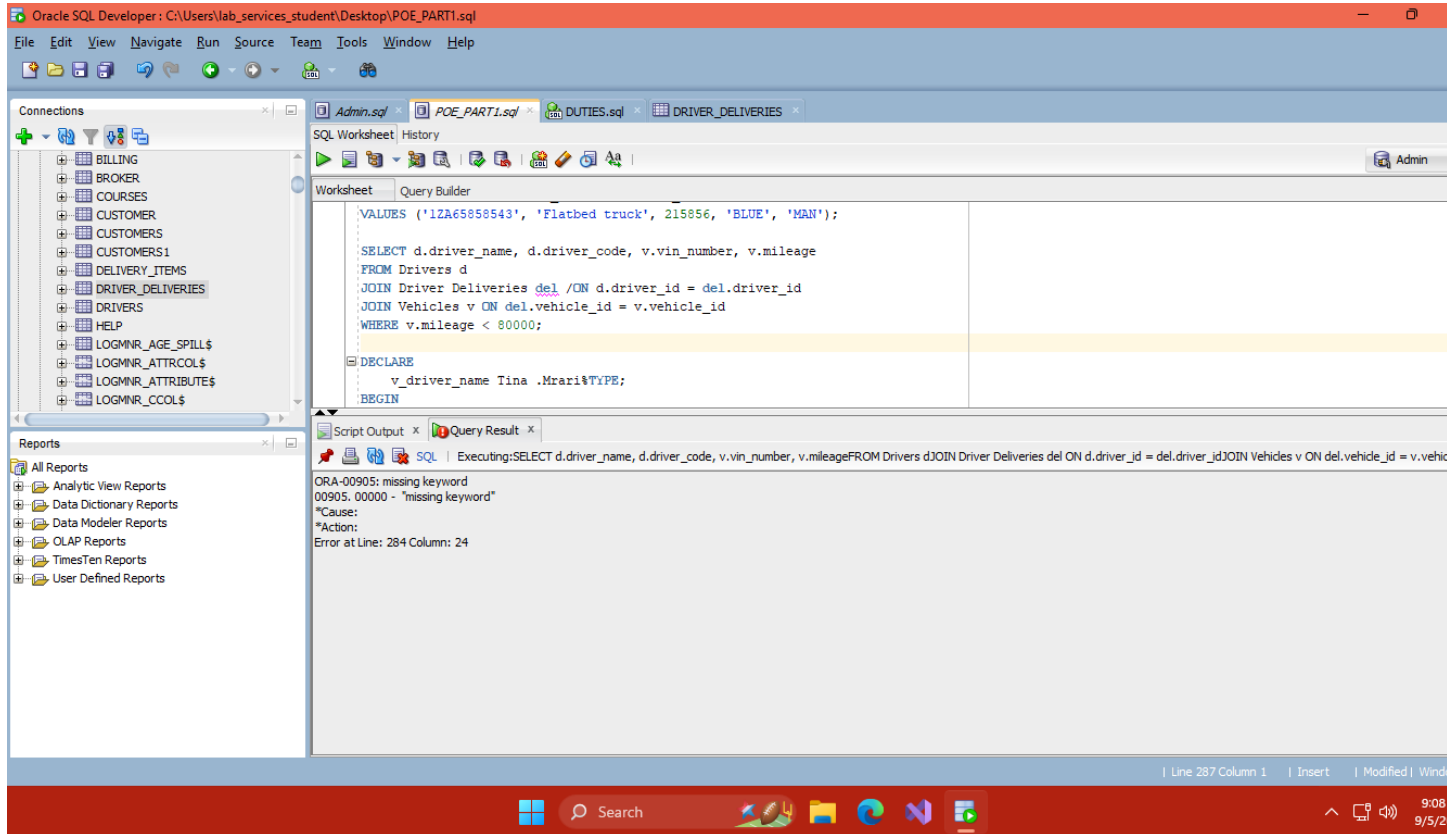
Upgrading generally hierarchical security and uprightness.

Advancing responsibility, straightforwardness, and moral way of behaving.

Relieving the gamble of extortion, waste, and mistake.

QUESTION 4

4.1.



4.2. Flat File Database Model:

Structure: Data is stored in a single table with rows and columns.

Relationships: No predefined relationships between data elements.

Relational Database Model:

Structure: Data is organized into different tables, each representing a specific entity.

Relationships: Data elements are related through defined relationships which are called foreign keys.

I would use a relational database model because it offers the flexibility, scalability, and data integrity required by CHEETAH DELIVERIES to manage its operations effectively.

QUESTION 5

5.1.

```
BEGIN

SELECT staff_id, first_name, surname, COUNT(*) INTO v_staff_id, v_first_name, v_surname, v_delivery_count
FROM Staff s
JOIN Deliveries d ON s.staff_id = d.staff_id
GROUP BY staff_id, first_name, surname
ORDER BY COUNT(*) DESC
FETCH FIRST ROW ONLY;

DBMS_OUTPUT.PUT_LINE('51014' || v_staff_id);
DBMS_OUTPUT.PUT_LINE('Jabu' || v_first_name);
DBMS_OUTPUT.PUT_LINE('Xolani' || v_surname);
DBMS_OUTPUT.PUT_LINE('2' || v_delivery_count);

END;
```

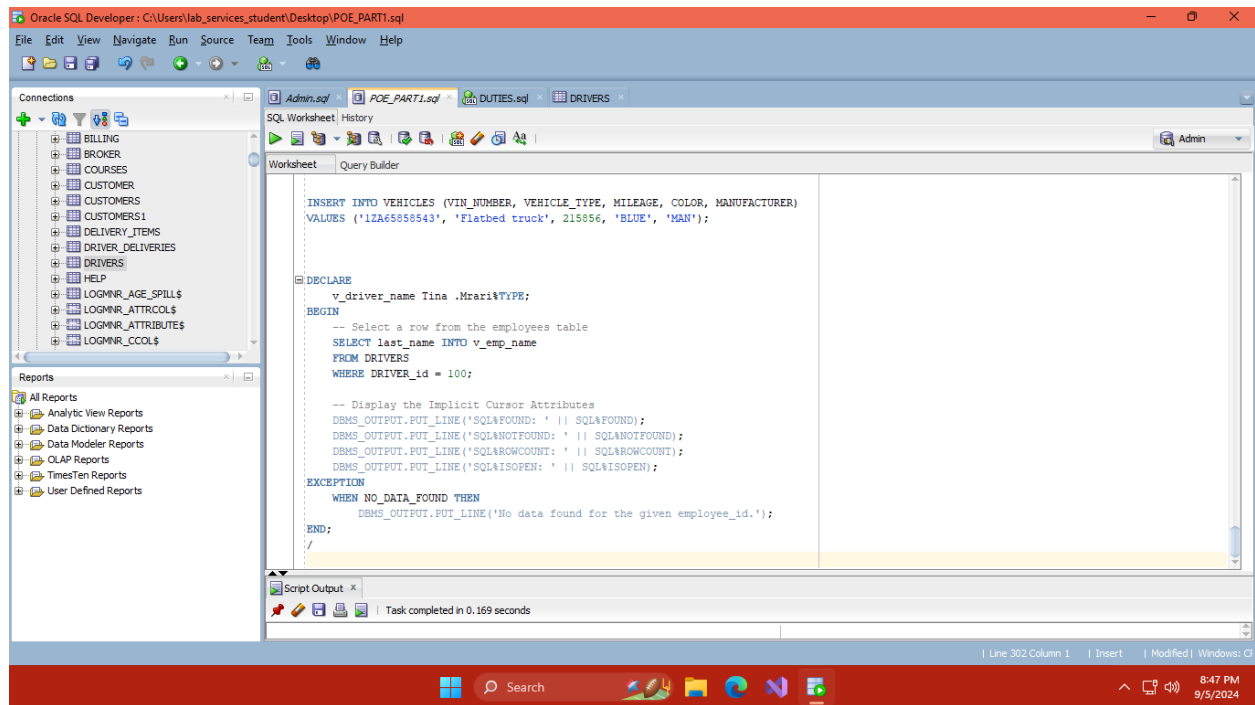
QUESTION 6

6.1. a. Implicit Cursor Attributes

When: Used for DML functions (INSERT, UPDATE, DELETE) so it can retrieve information about the operation's success or failure, such as the number of rows affected or error messages.

b. Explicit Cursor Attributes

Needed for more granular control over cursor behavior, like fetching rows one by one, handling errors, or returning multiple result sets it is for the complex data that manipulates tasks



6.2. Generate unique identifiers so that the sequences are used to automatically generate unique numeric values, often used as primary keys in tables and make sure that you maintain data integrity: They ensure that each new record has a unique identifier, preventing duplicates.

