Sample Student Exam Submission- Marked Answers May Not Be The Correct Answers

IS340-Databases for Management Midterm Exam

Open Note, Open Book, Optional Group, Midterm Exam. Take your time!

Enter Your First, Last Name, and anyone you are collaborating with for this exam. *

Re-enter Your First, Last Name and anyone you are collaborating with for this exam *

Noah and Spencer, are both renowned aficionados on the history of databases. They state that "a workgroup database is a(n) _____database and a desktop database is a(n) _____database" and they would be correct in this conclusion. * 5 points

- distributed, single-user
- multi-user, single-user
- cloud, local
- multi-user, local
- None of the above

Katie noticed that the database structure in a _____ is stored as a _____ which are _____ in nature to each other. * 5 points

- (●) DBMS, collection of files, independent
- ( ) RDBMS, key/value Pairs, relational
- ( ) DBMS, collection of files, relational
- ( ) RDBMS, collection of files, independent
- ( ) None of the above

Consider two scenarios. In the first scenario, at a local university the professors are asked to determine who has been absent for that week and also to determine who has missed two or more classes year to date and to send an email with this information on a weekly basis. In the second scenario, a student who has not been attending class has lost track of how many times they have been absent. The student has asked the professors TA, Kelly, to calculate how many times they have been absent in each class and to email them with this information as soon as possible. Which of the following is MOST correct regarding how Kelly should proceed? * 5 points

- ( ) The first email can be answered with an ad-hoc query containing derived attributes. The second email can be answered with a report.
- ( ) The first email can be answered with a report and does not contain derived attributes. The second email can be answered as an ad-hoc query
- (●) The first email can be answered with report containing derived attributes. The second email can be answered with an ad-hoc query
- ( ) The first email can be answered with an ad-hoc query and does not contain derived attributes. The second email can be answered as a report and does not need derived attributes
- ( ) None of the above

Which of the following statements are true? * 5 points

- [ ] The functions on two tables of Product-->Select-->Project are the steps for a natural join. If there are unmatched values on the right hand side of the new table it is a left outer join.
- [ ] The functions on two tables of Product-->Project are the steps for a natural join. If there are unmatched values on the right hand side of the new table it is a left outer join.
- [x] The functions on two tables of Product-->Select-->Project are the steps for a natural join. If there are unmatched values on the right hand side of the new table it is a right outer join.
- [ ] The functions on two tables of Product-->Select-->Project are the steps for an equijoin. If there are unmatched values on the right hand side of the new table it is a right outer join.
- [ ] None of the above

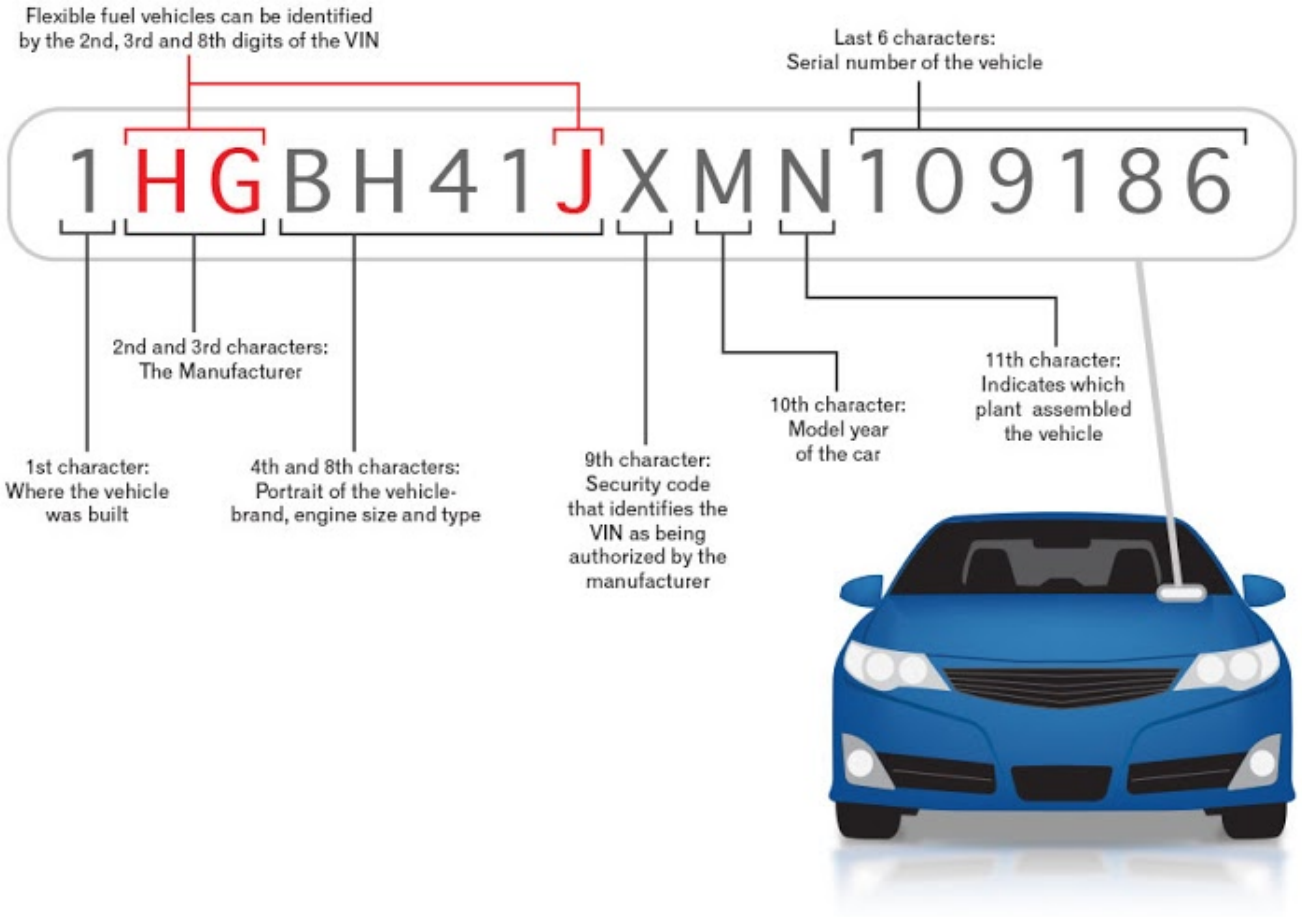
Consider the two "Select" statements below. What best describes them? * 5 points

```
SELECT Orders.OrderID, Customers.CustomerName, Orders.OrderDate
FROM Orders
INNER JOIN Customers ON Orders.CustomerID=Customers.CustomerID;

SELECT COUNT(ProductID)
FROM Products;
```

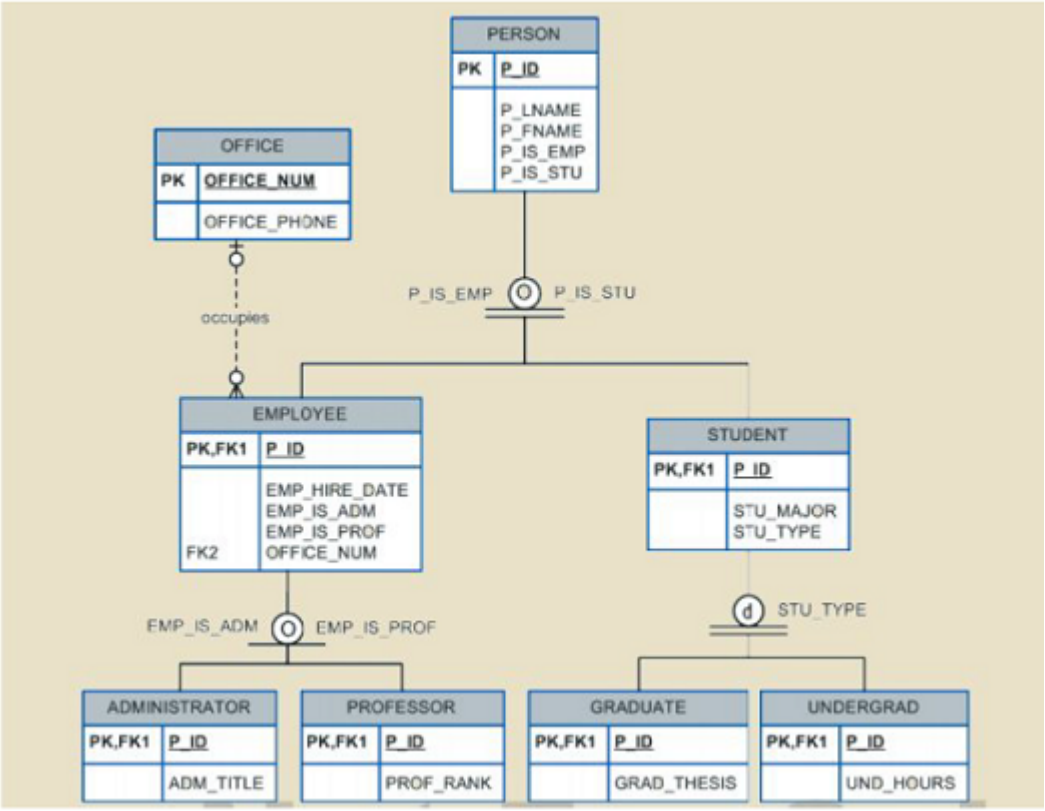
- [ ] a tertiary relationship and a unary relationship
- [x] a unary relationship and a binary relationship
- [ ] a binary relationship and a unary relationship
- [ ] a bi-directional relationship, and a uni-directional relationship
- [ ] None of the above

Emma has purchased a new car. Doreen and Austin have noticed that the VIN has some interesting characteristics. In considering her new VIN noted in the following figure. What type of attribute is the VIN? * 5 points



- [ ] An optional attribute
- [ ] A multivalued attribute
- [ ] A composite identifier
- [x] A composite attribute
- [ ] None of the above

Mario and Tiffany have been hired as research assistants in the college of business to assist with a database implementation. They receive the diagram noted below which depicts a _____ and STU_TYPE, EMP_IS_PROF, EMP_IS_ADM are examples of _____EMPLOYEE and STUDENT are examples of_____ * 5 points



- SpecializationHeirarchy/ERD, Supertype Discriminators, Subtypes
- SpecializationHeirarchy/EERD, Subtype Discriminators, Supertypes
- SpecializationHeirarchy/EERD, Subtype Attributes, Supertypes/Subtypes
- SpecializationHeirarchy/EERD, Supertype Attributes,Supertypes/Subtypes
- None of the above

Tiffany, Neyland, and Josiah are working on yet another group project for one of their many classes at UAH. They receive a copy of the spreadsheet noted below. The spreadsheet is _____ and contains at least _____. * 5 points

Database name: Ch01_Text

C_NAME	C_PHONE	C_ADDRESS	C_ZIP	A_NAME	A_PHONE	TP	AMT	REN
Alfred A. Ramas	615-844-2573	218 Fork Rd., Babs, TN	36123	Leah F. Hahn	615-882-1244	T1	100.00	05-Apr-2018
Leona K. Dunne	713-894-1238	Box 12A, Fox, KY	25246	Alex B. Alby	713-228-1249	T1	250.00	16-Jun-2018
Kathy W. Smith	615-894-2285	125 Oak Ln, Babs, TN	36123	Leah F. Hahn	615-882-2144	S2	150.00	29-Jan-2019
Paul F. Olowski	615-894-2180	217 Lee Ln., Babs, TN	36123	Leah F. Hahn	615-882-1244	S1	300.00	14-Oct-2018
Myron Orlando	615-222-1672	Box 111, New, TN	36155	Alex B. Alby	713-228-1249	T1	100.00	28-Dec-2018
Amy B. O'Brian	713-442-3381	387 Troll Dr., Fox, KY	25246	John T. Okon	615-123-5589	T2	850.00	22-Sep-2018
James G. Brown	615-297-1228	21 Tye Rd., Nash, TN	37118	Leah F. Hahn	615-882-1244	S1	120.00	25-Mar-2019
George Williams	615-290-2556	155 Maple, Nash, TN	37119	John T. Okon	615-123-5589	S1	250.00	17-Jul-2018
Anne G. Farriss	713-382-7185	2119 Elm, Crew, KY	25432	Alex B. Alby	713-228-1249	T2	100.00	03-Dec-2018
Olette K. Smith	615-297-3809	2782 Main, Nash, TN	37118	John T. Okon	615-123-5589	S2	500.00	14-Mar-2019

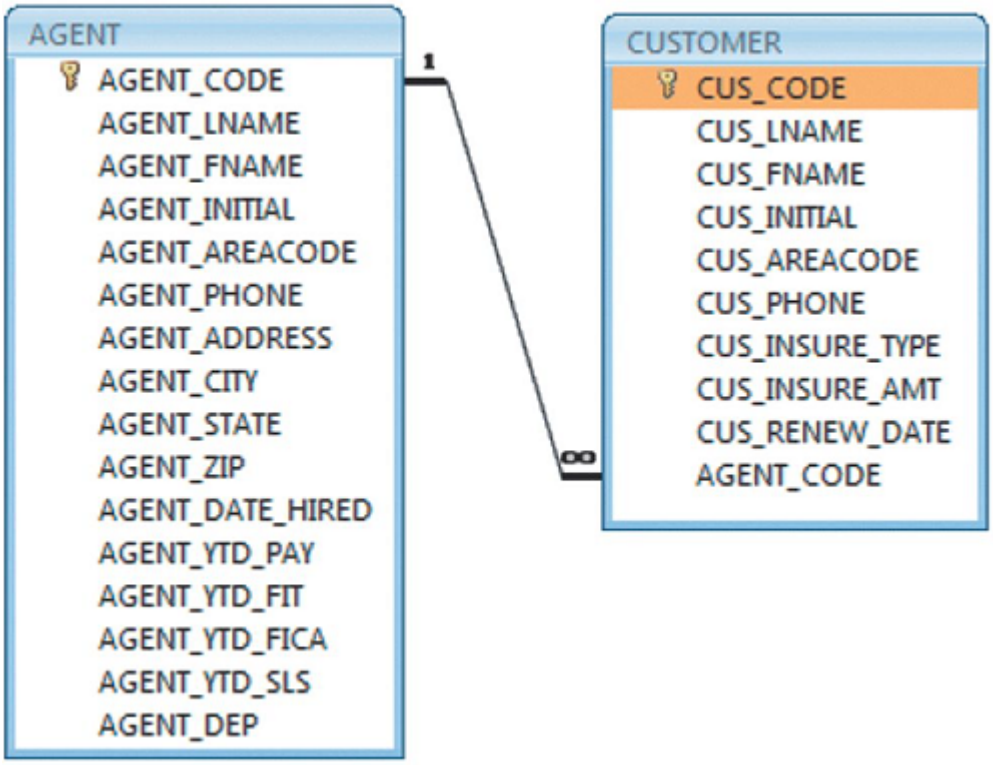
C_NAME = Customer name
C_PHONE = Customer phone
C_ADDRESS = Customer address
C_ZIP = Customer zip code

A_NAME = Agent name
A_PHONE = Agent phone
TP = Insurance type
AMT = Insurance policy amount, in thousands of $
REN = Insurance renewal date

- ○ not in first normal form, two entities
- ○ in first normal form, two primary keys
- ◉ in first normal form, two entities
- ○ not in first normal form, two primary keys
- ○ None of the above

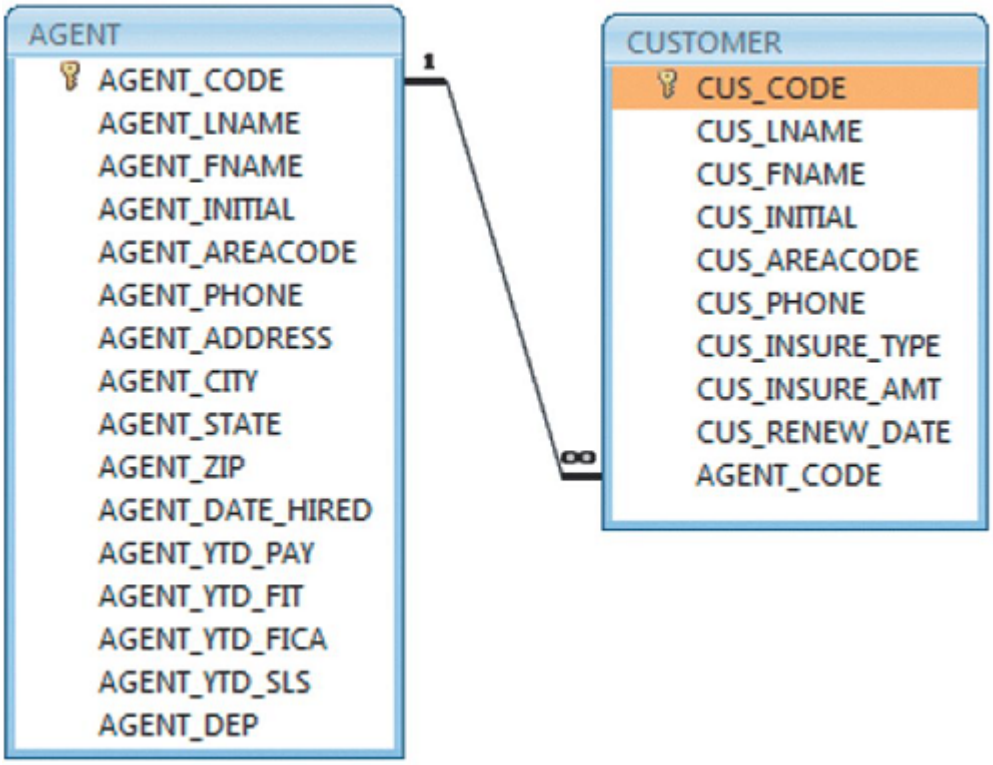
David, Justin, and Josh are working on migrating a database from a legacy Access system to Oracle. They have been given the figure below to assist them in this endeavor. The figure below denotes what type of figure? *

5 points



- ○ Conceptual Model
- ○ Entity Relation Diagram/Model
- ○ External Model
- ◉ Relational Diagram
- ○ None of the Above

Josh, Reece, and Vermeo are working on the same migration of a database from a legacy Access system to MySQL. They have been given the figure below to assist them in this endeavor. What is the foreign key in this relationship and what type of relationship does it depict? * 5 points



- ○ Cus_Code, A 1:M relationship with AGENT_CODE and CUS_CODE as foreign keys
- ○ Agent_Code, A M:N relationship with Agent_CODE and CUS_CODE as primary keys
- ○ Cus_Code, A 1:M relationship with AGENT_CODE and CUS_CODE as primary keys
- ○ Agent_Code, A 1:1 relationship with AGENT_CODE and CUS_CODE as primary keys
- ◉ None of the Above

Ellen loves to travel and noticed that on Delta.com there is a requirement to checkin for a flight that has been booked. The checkin requirements that Aditi needs to know is analogous to a _____ and the longest one requires _____ attributes * 5 points

- (●) composite primary key, 3
- ( ) surrogate primary key, 4
- ( ) surrogate primary key, 3
- ( ) composite primary key, 4
- ( ) None of the above

What is needed to establish a connection with the MySQL server in this instance? * 5 points

- [ ] use port 3305
- [ ] use port 3306
- [x] use port 3307
- [x] leave the default schema blank
- [ ] leave the default schema with your username
- [ ] use your UAH account name for the password

Elayna is attempting to execute a DDL statement and keeps receiving an error message. Lauren review's her SQL syntax which is noted below. What is missing? (Order is important) * 5 points

```
`countries` (
`COUNTRY_ID` varchar(2) NOT NULL,
`COUNTRY_NAME` (40),
`REGION_ID` (10,0),
(`COUNTRY_ID`),
KEY `COUNTR_REG_FK` (`REGION_ID`)
);
```

- {Create}{Varchar}{Primary Key} {Key}
- {Create Table}{varchar} {decimal}{ Key}
- {Create}{varchar} {decimal}{ Primary Key}
- {Create Table}{varchar} {decimal}{ Primary Key}
- None of the above

Stephen is attempting to execute a SQL statement in which he must use the IN operator to select all the records where Country is either "Norway" or "France"and keeps receiving an error message. Jonathan review's and corrects his SQL syntax. What is the correct syntax that Stephen uses? * 5 points

- SELECT (DISTINCT) * FROM Customers WHERE Country IN('Norway','France');
- SELECT * FROM Customers WHERE Country IN('Norway','France');
- SELECT * FROM Customers WHERE Country ('Norway','France');
- SELECT * FROM Customers IN Country IN('Norway','France');
- None of the Above

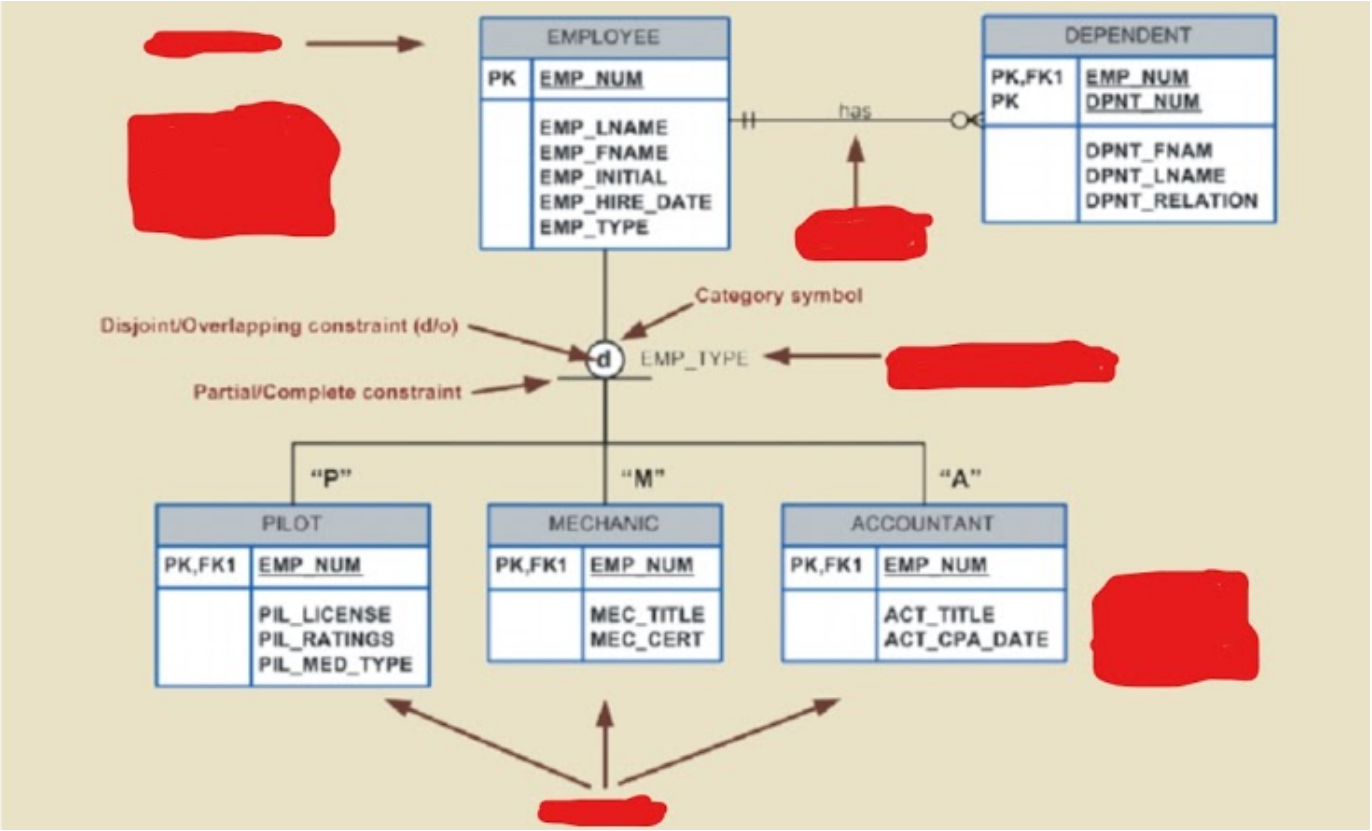
An entity containing one or more derived attributes is in what normal form? * 5 points

- [ ] 1NF
- [x] 2NF
- [ ] 3NF
- [ ] 4NF
- [ ] BCNF

What would happen if the building KOM were deleted * 5 points

- [ ] Nothing
- [ ] Two or more teacher's records would be completely deleted from the file
- [ ] Three or more teacher's records would be completely deleted from the file
- [x] One or more teacher's records would be completely deleted from the file

Consider the following figure. Select what is true * 5 points



- [ ] Employee is a subtype
- [x] Employee is a supertype
- [x] There is a disjoint constraint
- [ ] There is an overlapping constraint
- [x] There is a partial constraint
- [ ] Employee is a one to many relationship with Pilot, Mechanic, and Accountant
- [x] Employee is a one to one relationship with Pilot, Employee, and Accountant
- [ ] The figure depicts an ERD
- [x] The figure depicts an EERD

Carter has been doing some digging to expand her analytics. She noticed that databases could be classified by their data structure types. There are _____ primary types of data structures. Where _____ data is most used in traditional DBMS and to some extent _____ could be used as well if it is properly prepared. * 5 points

- [ ] 2, structured, unstructured
- [ ] 4, semistructured, structured
- [x] 3, structured, semistructured
- [ ] 3, unstructured, semistructured
- [ ] None of the above

Isaiah, has been diligently practicing his SQL scripting on the website that Dr. Avery mentioned in class. He comes across a question on the final exam which states that he needs to create a query which selects all records from the Customer's table, sorts the result alphabetically, first by the column Country, then, by the column City. What answer should Isaiah choose? * 5 points

- [x] SELECT * FROM Customers ORDER BY Country, City;
- [ ] SELECT * FROM Customers ORDER Country, City;
- [ ] SELECT * FROM Customers ORDER ALPHA Country, City;
- [ ] SELECT * FROM Customers ORDER WITH Country, City;
- [ ] None of the above

Consider the following figure. A user could cause _____ anomalies. Particularly, adding a new agent will create _____ and this can be resolved by adding _____ or creating a new entity. * 5 points

FIGURE 1.7 CONTENTS OF THE CUSTOMER FILE

Database name: Ch01_Text

C_NAME	C_PHONE	C_ADDRESS	C_ZIP	A_NAME	A_PHONE	TP	AMT	REN
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C_NAME = Customer name
C_PHONE = Customer phone
C_ADDRESS = Customer address
C_ZIP = Customer zip code

A_NAME = Agent name
A_PHONE = Agent phone
TP = Insurance type
AMT = Insurance policy amount, in thousands of $
REN = Insurance renewal date

- {update, deletion, insertion}{blank values} {input}
- {update, deletion, insertion}{null values} {flags}
- {update, deletion, insertion}{null values} {input}
- {data integrity, data redundancy}{null values} {input}
- None of the above

BONUS: Insert the screenshots of your Coding Exercise 1 credit will be given for 3+ completed exercises. 5 points