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| **User** | Habsatou War |
| **Course** | 20/FA DATABASE DESIGN & SQL 1(111-001) |
| **Test** | Test 1 - Part 1 |
| **Started** | 10/1/20 10:29 PM |
| **Submitted** | 10/1/20 11:32 PM |
| **Status** | Needs Grading |
| **Attempt Score** | Grade not available. |
| **Time Elapsed** | 1 hour, 2 minutes |
| **Instructions** | Answer all questions completely.  Make sure you answer ALL parts of any multi-part question. |
| **Results Displayed** | All Answers, Submitted Answers, Correct Answers, Feedback, Incorrectly Answered Questions |

* **Question 1**

Needs Grading

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| Ungraded | What is a database?  Why is it important to learn about databases as a software development student? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | The database is a collection of information organized to provide efficient retrieval of the data.It important to learn it because allmost all business application use database and as a software developer you are likely to create a database or to utilize it | | Correct Answer: | Correct  A database is an organized collection of data.  Every software application that you as a software developer writes in industry will require a database.  You must know how to develop and read a database. | | Response Feedback: | [None Given] | |  |  |  |

* **Question 2**

Needs Grading

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| Ungraded | What is a relational database?   What are the benefits associated with a relational database? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | It is a set of tables that are related. They are easy to retrieve data and to extend. | | Correct Answer: | Correct  A relational database is a digital database whose organization is based on the relational model of data.  The benefits of a relational database is that it is scalable, lacks replication of database, and provides a means to retrieve information efficiently and effectively. | | Response Feedback: | [None Given] | |  |  |  |

* **Question 3**

Needs Grading

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| Ungraded | List the steps in designing a database.  Why is it important to design a database per these steps? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | To design a database we should:  Determine the purpose / mission of the database  Collect, find, and organize the information  Identify the entities  identify the relationship between entities  identify the attributes of the entities  identify the data type of the attributes  specify the primary keys  specify the foreign keys  Build the physical database  apply the normalization rules  It is important because it helps to collect, find, and organize the information. So that the database can reduce redundancy, ensure an accuracy and integrity of the information. | | Correct Answer: | Correct  Determine the purpose of your database  Collect, find, and organize the information needed in your database  Identify the Major Entities from your Requirements  Identify the Relationships Between the Entities  Identify the Attributes of each Entity  Identify the Data Types of each Attribute  Specify primary keys  Form Relationships Between Entities with Foreign Keys  Build Physical Database  Apply the normalization rules | | Response Feedback: | [None Given] | |  |  |  |

* **Question 4**

Needs Grading

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| Ungraded | What is an entity as it relates to database design? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | An entity is a person, place, or thing in the real world about with data that can be stored in a database. | | Correct Answer: | Correct  An entity is a noun (person, place or thing) that we identify from the requirements based on the steps of the database design. | | Response Feedback: | [None Given] | |  |  |  |

* **Question 5**

Needs Grading

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| Ungraded | List and define the different types of relationships that can exist between entities. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | one to one  many to many  one to many | | Correct Answer: | Correct  One to One  One to Many  Many to Many | | Response Feedback: | [None Given] | |  |  |  |

* **Question 6**

Needs Grading

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| Ungraded | How does the ERD, it entities, and its relationships relate to the physical tables of a database? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | The entities become the tables and the relationships are made by the foreign keys.  A one to many relationship : the primary key of Parent table (one side) will be represented by the foreign key in the child table (Many side).  A many many relationship : create a new table with the name of both tables that, have foreign key goes to the child table representing each instance of many relationship of the the primary key in the parent table. | | Correct Answer: | Correct  Every entity in an ERD will become a table in a physical database.   The designed Primary Keys will be established in each table.  The identified data types in the design will be converted to the DBMS related data types.  Based on the relationship, where to place the foreign key will be established.   That is, for One to Many, the child table (MANY side of this) will hold the foreign key.   For Many to Man,  an additional table will need to be created that will be named the two entities  that share this relationship. The foreign keys representing the primary keys of the two tables will be included in this table. | | Response Feedback: | [None Given] | |  |  |  |

* **Question 7**

Needs Grading

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| Ungraded | What is the definition and purpose of a data type as it relates to the attributes of an entity and the columns of a table? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Datat ype is the type of the date. Each attribute stores a specific data type. | | Correct Answer: | Correct  Attributes/columns have an associated data type that defines the kind of data; for example, character, integer, or binary, the attribute/column can contain.  Each DBMS has it own set of unique data types that must be considered to maximize space and effiency. | | Response Feedback: | [None Given] | |  |  |  |

* **Question 8**

Needs Grading

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| Ungraded | What is the definition of a primary key?  What is the definition of a foreign key?  How do they relate to each other in a physical database? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | A primary key is a unique identifier of a table.  A foreign key is a column or a set of columns in one table that connects to the primary key data in the parent table.  The foreign key in the child table references the primary key in the parent table | | Correct Answer: | Correct  A primary key is the unique identifier for each instance/row in a entity/table.  A foreign key is the representation of the primary key in another table. | | Response Feedback: | [None Given] | |  |  |  |

* **Question 9**

Needs Grading

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| Ungraded | What is referential integrity and how do we ensure it in the physical database of Microsoft SQL Server? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | It is a relational database concept with states that table relationships must be consistent always.   a foreign key must match a  primary key. | | Correct Answer: | Correct  Referential integrity ensures that every foreign key there is a matching primary key from the parent table.  To allow MS SQL Server to establish referential integrity, you must add a foreign key constraint to the child table identifying the foreign key and what it references.  We have done this via the ALTER Command on those tables. | | Response Feedback: | [None Given] | |  |  |  |

* **Question 10**

Needs Grading

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| Ungraded | What is the purpose of a SQL Join?   What are always the columns of which two tables are joined? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | SQL join is to combine the columns and rows from two to many tables. They are foreign keys and primary keys. | | Correct Answer: | Correct  Since we broke up all data via our database design, we must bring it together for create meaningful information.  We do this with the Select Join Command.  To join tables, we must do so with the parent table's primary key and the child table foreign key. | | Response Feedback: | [None Given] | |  |  |  |

* **Question 11**

Needs Grading

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| Ungraded | How can you make sure that your SQL scripts will be easy to read and maintain? |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Make sure to put comments to tell what task we are going to do.  Organize the data by using our template provide in class. | | Correct Answer: | Correct  Name all tables based on good naming conventions.  Name all columns based on good naming conventions using Hungarian notation.  Align and indent all code for easy reading.  Comment all code accordingly, | | Response Feedback: | [None Given] | |  |  |  |

Thursday, October 1, 2020 11:33:04 PM EDT