DSD 602 Database Management – Assessment 1

SQL Module Code	DSD 602	**Module Title**	Database Management		
Level	6	**Credit Value of Module**	15		
Assessment Task	Create a database and access it using database queries to perform operations and create a range of views				
Assessment No	1	**Total marks**	70	**Weighting**	70%
Type of Submission	Word document				
Method of Submission	Upload documents to GitHub or Cloud Campus				
Due Date	XXXXX				

Learning Outcomes addressed

Learning outcomes:

PLO(s): 1

Design and build a secure database to meet client requirements

PLO(s): 2

Select and apply database operations for a range of scenarios

Passing Criteria

Module - DSD 602 Database Management

Total Marks: 70
Total Weighting: 70%

A+	90-100%	C+	60-64%
A	85-89%	C	55-59%
A-	80-84%	**C-**	**50-54% PASS MARK**
B+	75-79%	D+	45-49%
B	70-74%	D	40-44%
B-	65-69%	D-	0-39%

Resubmission or Reassessment Requirements

If a student's performance fails to meet any of the requirements in the marking schedule, the student may be given an opportunity to resubmit or be reassessed.

Resubmission: If it is apparent (before or during marking) that evidence is incomplete, either by omission or error, the assessor may direct the student's attention to the areas of breach, in general terms, and invite him/her to resubmit the work with the identified areas corrected. Only one resubmission opportunity may be given.

Reassessment: If, after valid processing has been applied, a student is still judged not to have reached the standard required, the student may be offered a further assessment opportunity. A new date will be agreed upon, at the assessor's discretion. Only one reassessment opportunity may be given.

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Assessment brief and instructions

Instruction for the assessment

- This assessment is worth 70% of the total marks for the course.
- The assessment must be delivered individually.
- Your assessment **must** be done using either **SQL Server Management Studio** or **SQL Server Express**
- Your submission **must** include references (APA 7 format) if referring to the source material. Failure to do so will have consequences as per the student handbook, "Academic cheating" section.
- You must fill out and submit the ATC Vision College cover sheet.
- If applicable, a GitHub repository must be kept private, and only the tutor should be added as a collaborator.

Assessment Conditions

This is a resource-based assessment. This means that you may have access to any relevant resources to assist you. This could include your learning materials, information on the Internet, and so on. However, all work must be your own with no assistance from any other person.

Assessment brief

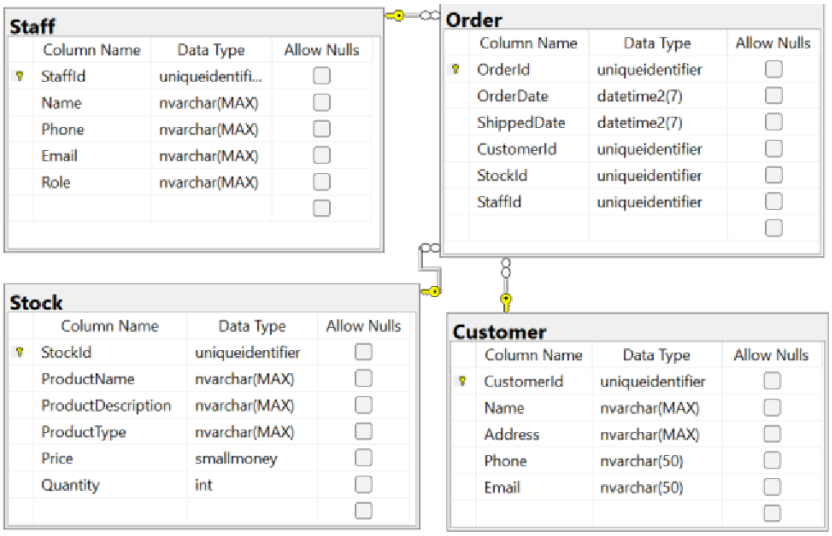
You are required to create a database and perform operations using queries and other tools. Please note you must complete all the tasks in sequence, firstly database needs to be created then scripts and after that, you can perform other operations.

Assessment Tasks

Section 1- Create a secure database. [35 marks]

Task 1:- Create a database for the *Bike Spare Parts* shop that sells bike parts and components using the SQL Management Studio. Your database must replicate the schema below, (you **must** have exact names for tables & columns, data types, primary keys and relationships). [10 marks]

Database schema:-



Staff Table -Holds the staff details.
Customer Table-The person who has an account with the shop, and their details

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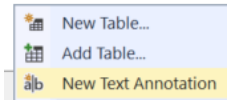
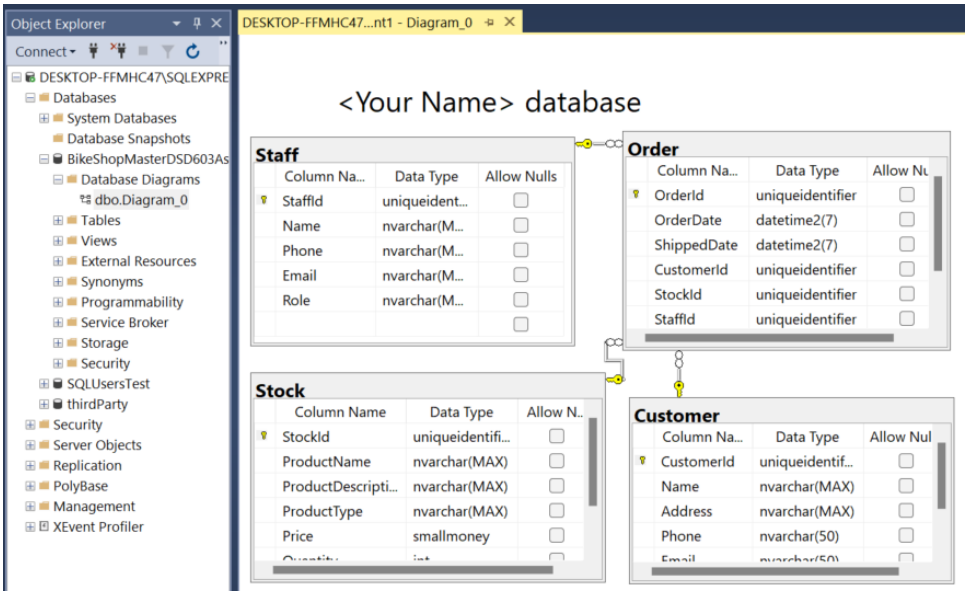
Stock Table- Holds the bike part products that the shop sells
Order Table-The orders that the customers make. The Order table holds the GUIDs from the staff person who sells the bike part, the customer's Guid, and the Stock Guid. It also holds the Order and Shipped dates of the products.

Take a screenshot of your table structure with Your database diagram and your name added in using the Text annotation tool. (Right click / New Text Annotation)



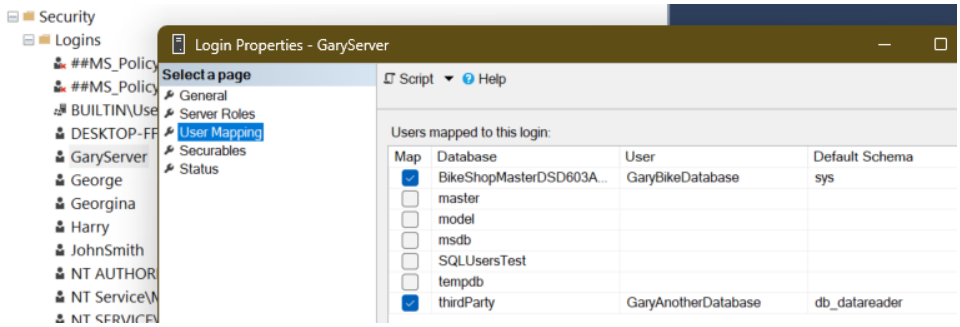


Task 2:- Insert the data into tables using the provided script- InsertALLDatabaseData-NEW.sql. (If you get an error, ensure your tables and columns' names are exactly the same as the given schema.) [5 marks]

Task 3:- You are required to create the following users and provide the screenshots of the user mapping.

- Create a username on the server named YournameServer (JohnServer). Using your Servername create a new user in the bikeShop database named YournameBikeDatabase (JohnBikedatabase) who can perform all configuration and maintenance activities on the database. [5 marks]
- Create another database named thirdParty. Create a new user for that database who can only read data. [5 marks]

Take the following screenshot of your Server Login showing the User Mapping.



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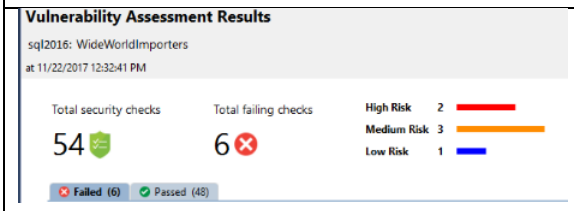
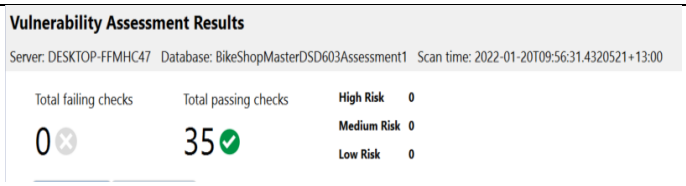
Task 4:- Run a Vulnerability assessment for the *Bike Spare Parts* database and implement the appropriate actions to resolve security issues. You must provide screenshots of your first scan, and after resolving security issues. [5 marks]

Ex.

First scan	All errors resolved
	

Task 5:- Protect your database by applying Data Discovery & Classification paradigm for the *Bike Spare Parts* database and apply the appropriate recommendations. You must provide screenshots of your first report, and after implementing recommendations. [5 marks]

Section 2- Database operations for a range of scenarios. [35 marks]

Task 6:- Create a View for each of the following operations on the database using appropriate queries. In a Word Document post down the SQL you use, and a screenshot of the table answer. Make sure you cover sufficient information in your screenshots as in the example given below.

Name your Views in the structure of below

(Range of operations – Create, Read, Max(), Sum(), Count(), Group By, Min(), Avg(), Having(), Left Join, Right Join, Top, and Like)

- Create a **list of stock** items names that **have NOT been sold**. [5 marks]
- What is the **name of the staff member, who has sold stock,** and has sold the **least $ value of a stock**? [5 marks]
- Create a **list of customers'** names and the **products they have purchased**, **grouped by Customer**. [5 marks]
- What is the **name of the customer** who has **made the most orders**? [5 marks]
- What is the **name of the customer** who has **spent the most money** at the Bike Shop? [5 marks]
- Create a **list of the 5 most expensive stock items** with their **names and prices**, and **order** the result by **prices in descending order.** [5 marks]
- List all the stocks that have **Saddle** in the **Name or Description** [5 marks]

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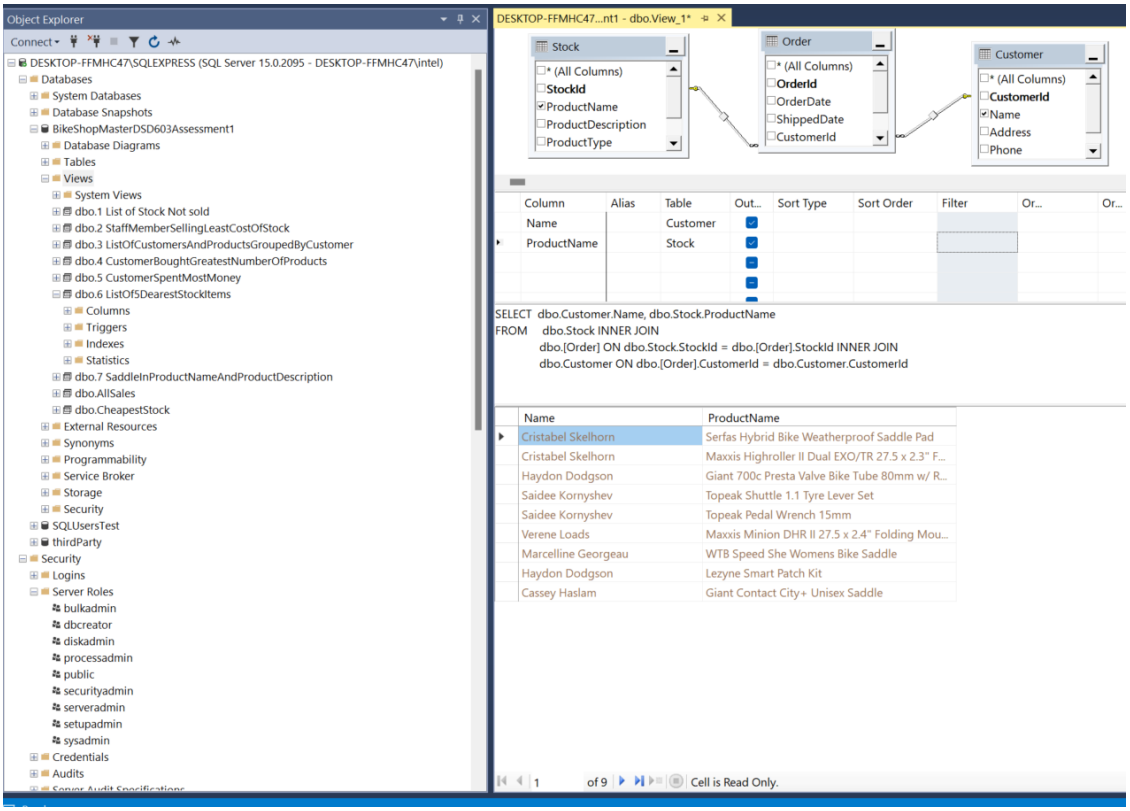
Ex-



Submission

- You need to upload a Microsoft Word document to Cloud Campus or as directed by your tutor which includes, a cover sheet, tasks- 3, 4, 5 & 6 screenshots, and references (if any)
- <u>In case of issues such as unclear screenshots, your tutor might check your SSMS database and ask for further information. Therefore you are not supposed to delete your work until it is marked or advised by your tutor.</u>

MARKING RUBRIC

NOTES:

***Wordcount** is indicative only with no penalty for submitting over the suggested range.

***Sufficient** is defined as per the points below:

a) The answer provided by the student is correct, logical and meets the requirements

b) The answer is supported by relevant ideas and/or supporting details.

c) Information is presented in a logical manner that is easily followed.

d) There is minimal interruption to the work due to misspellings and/or grammatical errors.

***Insufficient** is defined as not meeting any of the points above (a, b, c, and d).

***Reasonable** is defined as meeting at least point a) above.

***Most** is defined as about 80% of all, **Some** is defined as about 50% of all, and **Few** is defined as about 20% of all

Section 1 [35 marks]	**Grade Distribution** **Students must score 50% in each section**					**Student Mark**	**Comments**
	0	**2.5**	**5**	**7.5**	**10**		
Task 1	Incorrect or insufficient information	According to the given schema, the database was created though it has major errors in constraints (datatype, data length, primary keys and foreign keys)	According to the given schema, the database was created with some errors in constraints (datatype, data length, primary keys and foreign keys)	According to the given schema, the database was created with minor errors in constraints (datatype, data length, primary keys and foreign keys)	According to the given schema the database was created successfully which includes correct tables, columns, datatype, data length, primary keys and foreign keys		

MARKING RUBRIC

	0	1.5	2.5	4	5		
Task 2	Incorrect or insufficient information	Most of the tables' data doesn't match with the provided script.	Data inserted using the provided insert script with some errors	Data inserted using the provided insert script with minor errors	Data inserted successfully using the provided insert script		

	0	2.5	4	5		
Task 3a	Incorrect or insufficient information	Only a user was created on the server.	A user created on the server. Another user created for the database with the correct permissions but didn't use the correct naming as mentioned in the task.	A user created on the server. Another user created for the database with the correct permissions and used the correct naming as mentioned in the task.		

	0	2.5	4	5		
Task 3b	Incorrect or insufficient information	Only a new database was created.	A new database was created with the user who has read-only permissions but didn't use the correct naming as mentioned in the task.	A new database was created with the user who has read-only permissions and used the correct naming as mentioned in the task.		

MARKING RUBRIC

	0	**1.5**	**2.5**	**4**	**5**		
Task 4 * ignore the errors which can't be resolved by the students at this stage	Incorrect or insufficient information	First scan report provided	A first scan report was provided. Some of the errors are resolved. Screenshot provided for the second scan as well	A first scan report was provided. Most of the errors are resolved. Screenshot provided for the second scan as well	A first scan report was provided. All errors are resolved. Screenshot provided for the second scan as well		
	0	**1.5**	**2.5**	**4**	**5**		
Task 5	Incorrect or insufficient information	First scan report provided	A first scan report was provided. Some of the recommendations are implemented. Screenshot provided for the second scan as well	A first scan report was provided. Most of the recommendations are implemented. Screenshot provided for the second scan as well	A first scan report was provided. All recommendations are implemented. Screenshot provided for the second scan as well		
Section 2 [35 marks]							
	0		**3.5**		**5**		
Task 6a	Incorrect query or insufficient information		The correct syntax for the query though the result has minor issues		The correct syntax for the query which generates desired output		

MARKING RUBRIC

	0	**3.5**	**5**		
Task 6b	Incorrect query or insufficient information	The correct syntax for the query though the result has minor issues	The correct syntax for the query which generates desired output		
	0	**3.5**	**5**		
Task 6c	Incorrect query or insufficient information	The correct syntax for the query though not grouped by Customer	The correct syntax for the query which generates desired output		
	0	**3.5**	**5**		
Task 6d	Incorrect query or insufficient information	The correct syntax for the query though the result has minor issues	The correct syntax for the query which generates desired output		
	0	**3.5**	**5**		
Task 6e	Incorrect query or insufficient information	The correct syntax for the query though the result has minor issues	The correct syntax for the query which generates desired output		
	0	**3.5**	**5**		
Task 6f	Incorrect query or insufficient information	The correct syntax for the query though the result was not ordered by price in descending order	The correct syntax for the query which generates desired output		
	0	**3.5**	**5**		

MARKING RUBRIC

Task 6g	Incorrect query or insufficient information	The correct syntax for the query though the result was not ordered by Name in ascending order	The correct syntax for the query which generates desired output		