

**FACULTY OF COMPUTING AND INFORMATION TECHNOLOGY**

BMCS1053 Database Management

Assignment

Semester 202505

|  |  |  |
| --- | --- | --- |
| Programme (Year & Group) | : |  |
| Tutorial Group | : |  |
| Date Submitted | : |  |

Team members:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Name (Block Letters) | Registration No. | Signature | Marks |
| 1 |  |  |  |  |
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| 4 |  |  |  |  |





Name of 1 Name of 2 Name of 3 Name of 4



**FACULTY OF COMPUTING AND INFORMATION TECHNOLOGY**

**Plagiarism Statement**

We confirm that we have read and shall comply with all the terms and conditions of TAR University of Management and Technology’s plagiarism policy.

We declare that this assignment is free from all forms of plagiarism and for all intents and purposes is my own properly derived work.

Declaration Statement Acknowledged by

|  |  |  |  |  |
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| No | Name (Block Letters) | Registration No. | Signature | Date |
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**Assignment Assessment Form**

**Rating (Task 1, 2, 3, 4, 5, 6, 7) = 1: Very Poor, 2-3: Poor, 4-5: Average, 6-7: Good, 8-10: Excellent**

**Programme** (Year-Semester-Group):

**Member Name** (Alphabetical order):

|  |  |
| --- | --- |
| Name | Rating |
| 1. |  |
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| 3. |  |
| 4. |  |

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| --- | --- | --- | --- | --- | --- |
| **CLO2: Demonstrate the appropriate Structured Query Language (SQL) statement to query and manipulate data from a database. (P4, PLO3)**  **CLO3: Design a normalized database system for a business scenario using relational database management software. (C4, PLO2).** | | | | | |
| **Task No.** | **Task Descriptions** | **Weightage** | **Criteria** | **Comments/Marks** |
| 1(CLO 3) | Develop Business rules | 10% | * Include the required and relevant pairs of business rules. * All business rules must be clearly defined, precise, and reflect the policies and procedures of the organization’s operational environment. |  |
| 2(CLO 3) | Develop ERD | 10% | * Transform business rules to a relational database model correctly. * Correct use of Crow’s Foot notations. * Include all necessary entities, attributes & relationships |  |
| 3(CLO 3) | Develop DBDL | 10% | * Correct use of DBDL format as required * All required entities, attributes and relationships correctly shown * Indicate Primary key and foreign key clearly |  |
| 4(CLO 2) | Database Design  20% | 10% | * Correct tables, records and fields designed according to the ERD developed. |  |
| 10% | * Enforcement of entity integrity rule & referential integrity rule * Appropriate data types, default values and check constraints. |  |
| 5(CLO 2) | Records (Entries) | 10% | * Provide sufficient and quality data records * Well-designed records for adequate and logical choices of queries to be performed |  |

Sub Total: marks

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Individual evaluation for Task 6 & 7 | | | | 1 | 2 | 3 | 4 | Comments/Marks |
| 6  (CLO 2) | Queries Design  30% | 10% | * Flexible query for variety of inputs. Clear & proper identification of information needs. * Apply Accept, Prompt and variable substitution in queries. Flexible query to cater for variety of inputs, use of multiple tables. * Apply Report Formatting features. Meaningful report handlings. Data values formatted accordingly. * Only SELECT statements. |  |  |  |  |  |
| 10% |  |  |  |  |  |
| 10% |  |  |  |  |  |
| 7  (CLO 2) | Assignment Report | 10% | * Comprehensive, clarity and completeness coverage * Quality of report presented * Presentation and Q & A |  |  |  |  |  |
| **Assignment Marks / 100** | | |  |  |  |  |  |  |

**Task Allocations for Group Work (Task 1 to Task 5):**

|  |  |  |
| --- | --- | --- |
| **Task No.** | **Task Descriptions** | **In-charge Person (1, 2, 3, 4): Explain in details about task done** |
| 1  (CLO 3) | Develop Business rules | Person 2: Wrote Rules and . . . . . . . . . . |
| 2  (CLO 3) | Develop ERD | Person 4: Developed . . . . . . . and created . . . . . . . . . . |
| 3  (CLO 3) | Develop DBDL | Person 3: Completed ERD and was assigned . . . . . . . |
| 4  (CLO 2) | Database Design:  CREATE TABLE Statements | Person 1:  Person 2:  Person 3:  Person 4: |
| 5  (CLO 2) | Records (Entries): INSERT Statements | Person 1:  Person 2:  Person 3:  Person 4: |
| 6  (CLO 2) | Queries Design | Person 1:  Query 1.1: <Query Report Title>  Query 1.2: <Query Report Title>  Query 1.3: <Query Report Title>  Person 2:  Query 2.1: <Query Report Title>  Query 2.2: <Query Report Title>  Query 2.3: <Query Report Title> |

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**The Business case** 1

(Include the business case that you have chosen, with all your additional assumptions)

**Task 1: Business Rules of the System** x

1.1 Entities of System x

1.2 Business rules x

**Task 2: Entity-Relationship Modelling**

2.1 Entity-Relationship Diagram x

2.2 Assumptions x

**Task 3: Normalization** x

3.1 Attributes of entities with keys

**Task 4: Create Databases in Oracle** x

4.1 Customer Table

4.2 Product Table

4.3 Order Table

**Task 5: Sample Data / Records** x

(10 sample records for each table)

**Task 6: SQL Queries and Reports** x

6.1 (Name of 1st Student presenting) x

6.1.1 Query/Report 1:

6.1.2 Query/Report 2:

6.1.3 Query/Report 3:

6.2 (Name of 2nd Student presenting) x

6.1.1 Query/Report 1:

6.1.2 Query/Report 2:

6.1.3 Query/Report 3:

6.3 (Name of 3rd Student presenting) x

6.1.1 Query/Report 1:

6.1.2 Query/Report 2:

6.1.3 Query/Report 3:

**Task 7: Extra Effort Highlights** (List individual efforts)

7.1 (Name of Student 1) x

7.1.1 Views

7.1.2 Sequence/procedure/trigger/function or others

7.2 (Name of Student 2) x

7.1.1 Views

7.1.2 Sequence/procedure/trigger/function or others

7.3 (Name of Student 3) x

7.1.1 Views

7.1.2 Sequence/procedure/trigger/function or others

**Individual References (if any)** x

**Appendices (if any)** x

**Task 1: Business Rules of the System**

1.1 Entities of System

|  |  |  |
| --- | --- | --- |
| Base (Parent) Table | Transaction (Child) Table | Associative (Bridge) Table  (Additional entity created from the original Many-to-Many relations) |
| Customer  Staff | Orders | Order\_Details |

1.2 Business rules of entity A, B, C

**Task 2: Entity-Relationship Modelling**

2.1 Entity-Relationship Diagram

2.2 Assumptions

**Task 3: Normalization**

3.1 Attributes of entities with keys

**Task 4: Create Databases in Oracle**

4.1 Customer table

Create table CUSTOMER

(attribute1. . . . .

attribute2 . . . . .

. . .

. . .

Primary key. . . .

);

**(Use “Courier New” font (size 10) for SQL statements/scripts)**

4.2 Product table

**Task 5: Sample Data Records (10 sample records for each table)**

5.1 Customer table

Insert into customer values

( . . . . . . . . . . . . . . . . . . . . . . . . . . . . .);

Insert into customer values

( . . . . . . . . . . . . . . . . . . . . . . . . . . . . .);

(you may use Landscape orientation for your output where necessary

**(Use “Courier New” font (size 10) for SQL statements/scripts)**

**Task 6: SQL Queries and Reports**

6.1 (Name of 1st Student presenting)

6.1.1 Query/Report 1: Item Sales Details

Purpose: The purpose of this query is ……….

SQL statement:

SELECT xxxxx

FROM xxxxx

WHERE xxxxxxx

GROUP BY

**(Use Courier New font for select statements printout)**

**Sample Output:**

......

6.1.2 Query/Report 2: Detail report of…..

Purpose: The purpose of this report is ……….

PL/SQL code:

Sample Output:

**Task 7: Extra Effort Highlights**

For each of the extra effort that you have defined, provide a description and its application in your work.

**Individual References (if any)**

For each of the reference that you have referred, provide URL if possible.

**Appendices (if any)**