**School of Computing**

**ST1501 Data Engineering CA1**

**AY2023/2024 Semester 1**

|  |  |
| --- | --- |
| **Adm No** | **2222811** |
| **Name** | **Muhammad Fitri Amir bin Abdullah** |
| **Class** | **DAAA/FT/2A/06** |

|  |  |
| --- | --- |
| **Section A - Database Design (Entity Relationship Diagram)** | 30% |
|  | | |

|  |  |
| --- | --- |
| **Section B - Database Design (Database Diagram)**   * The database supports the described business scenario. * The chosen table names, field names and attributes are descriptive. * The database is normalized. | 10% |
|  | | |

|  |  |
| --- | --- |
| **Section C - Database Creation**   * Attach an SQL file to include create table statements including the primary key and foreign key definition. * Enter the details of each table in the template. | 10% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **List all the relations, PK, FK and all non key attributes for the database relation diagram. Attach an SQL file to show the create table SQL script to implementthe database design, including the primary key and foreign key definition.** | | | | | |
| **No** | **Relation Name** | **Primary Key** | **Non-key Attribute(s)** | **Foreign Key(s)** | **Referenced Relation** |
| 1 | employee\_rel | emp\_ID | emp\_Name | transaction\_id, item\_id | store\_rel |
| SSN |
| Phone |
| Address |
| PayType |
| Password |
| Manager |
| Email |
| Date\_hired |
| Date\_start |
| Date\_end |
| Pay |
| 2 | customer\_rel | cust\_ID | cust\_Name | - | - |
| cust\_Phone |
| cust\_Email |
| DateCreated |
| DateLastTrans |
| 3 | store\_rel | store\_ID | store\_address |  |  |
|  | | | | | |
| 4 | inventory\_rel  (weak relation) | item\_id + store\_id | quantity | - | item\_id – item\_rel  store\_id – store\_rel |
| 5 | item\_rel | item\_id | brand | - | - |
| description |
| price |
| cost |
| shape |
| size |
| UPC |
| Weight |
| Taxable |
| 6 | transaction\_rel | transaction\_id | dateTrans | emp\_id, cust\_id, store\_id | emp\_id – employee\_rel  cust\_id – customer\_rel  store\_id – store\_rel |
| 7 | basket\_rel  (weak relation) | transaction\_id + item\_id | quantity | transaction\_id, item\_id | transaction\_id – transaction\_rel  item\_id – item\_rel |

|  |
| --- |
| **Section D - The Query Statements 35%** |
| Query 1 |
| Query 1 results |
| Query 2 |
| Query 2 results |
| Query 3 |
| Query 3 results |
| Query 4 |
| Query 4 results |
| Query 5 |
| Query 5 results |
| Query 6 |
| Query 6 results |