**Project 4**

**CSIS 140 – Introduction to Information Systems and Internet Technologies**

**Spring 2014**

**Objectives:** Learn how to design, create, and maintain a relational database with the help of a database management system. Learn how to create queries, reports and forms.

**Part 1 Description (class work):** Study the Microsoft Access Tutorial provided by the instructor.

**Instructions:**

1. Create the database with name **SaleCo\_LastNameFirstName.accdb**

2. Implement the Relational Diagram shown on *SaleCo.bmp*:

* Import provided XML files to create tables.
* Enforce entity and referential integrity rules.
* Create the relational diagram showing the relationships between tables. Save the relationships report.

3. Design and execute the following queries.

1. Query1: Phone List (Fig1.PNG)
2. Query2: Phone List For Selected Last Name (Fig2.PNG for customer Smith)
3. Query3: Products Without Vendors (Fig3.PNG)
4. Query4: Customer Invoices (Fig4.PNG)
5. Query5: Customer Invoice Totals (Fig5.PNG)
6. Query6: Calculate Line Amount (Fig6.PNG)
7. Query7: Sum Of Line Amounts For Selected Invoice (Fig7.PNG for invoice 1008)
8. Query8: Sales By Selected Invoice (Fig8.PNG; create table SALES)
9. Query9: Append Data To Sales Table (Fig9.PNG; append data to table SALES)

4. Build the following forms.

* frmCUSTOMER (frmCUSTOMER.PNG)

5. Build the following reports.

* Customer Invoices (CustomerInvoices.PNG)

**Part 2 Description (homework):**

**Instructions:**

1. Create the database with name **MovieCo\_LastNameFirstName.accdb**

2. Implement the Relational Diagram shown on *MovieCo ERD.bmp*:

* Import provided XML files to create tables.
* Enforce entity and referential integrity rules.
* Create the relational diagram showing the relationships between tables. Save the relationships report.

3. Design and execute the following queries.

1. Query1: Write a query to display all movies that contain the word hope in the title (Fig1.bmp)
2. Query2: Write a query to display all movies that cost more than $40 (Fig2.bmp)
3. Query3: Write a query to display the average cost of all movies (Fig3.bmp)
4. Query4: Write a query to display the rental fees for movies (Fig4.bmp)
5. Query5: Write a query to display the movie genre and average rental fee for movies in each genre (Fig5.bmp)
6. Query6: Write a query to display the info for all movies that do not have a video (Fig6.bmp)
7. Query7: Write a query to display the info for all videos that were returned after the due date. Sort the results by rental number and movie title (Fig7.bmp)
8. Query8: Write a query to display the info for each movie that was returned on or before the due date (Fig8.bmp)
9. Query9: Write a query to display the membership number, last name, first name, and total rental fees earned from that membership. The total rental fee is the sum of all detail fees (without late fees) form all movies the member has rented (Fig9.bmp)

4. Build the following forms.

* frmMOVIE based on the MOVIE table (frmMOVIE.PNG)

5. Build the following reports.

* Member Movies (MemberMovies.PNG)

**Scoring Rubrics**

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| --- | --- | --- |
| **#** | **Feature** | **Score (%)** |
| **1** | SaleCo (relationships report, 9 queries, 1 form, 1 report) | 50 |
| **2** | MovieCo (relationships report, 9 queries, 1 form, 1 report) | 50 |
|  |  | 100 |

**Note. Any inconsistency with the provided images or any non-working feature will result in -10%.**