

Database Project template

Project Purpose:-

- 1- Database System-1 students have to be more and more familiar with database design and implementation.
- 2- Understanding of a generic procedure to design a database system
- 3- Analyze and define the data requirements of a database and determine different relational integrity constraints.
- 4- Practice on different DDL and DML queries which were covered in the course through building simple website application.

Project Description:-

- 1- You will be asking to select only one given field from **the below table,**

DB-ID	DB-NAME
1	HealthCare
2	Transportation
3	Agriculture
4	Tourism
5	Business

After choosing a field of application you must design a real case study and build a database management system
For this case study based on the requirement that you are asked on the following: -

- 2- First choose one topic from the above table
- 3- Third, build the ER diagram for the requirements you have been listed using (creatly or any tool)
- 4- Your database MUST CONTAINS:

- At least 6 tables with Min of 5 attributes per table that fully describes your topics.
 - Each table must have at least 10 data records.
 - At least 6 relationships must covers all (1-1, 1-m, m-n)
 - Must take care of (optional and mandatory)
 - Must contain one recursive relation
 - Must contain at least one computed, multivalued, composite attribute
 - At least one weak entity
 - Apply Naming conventions of your data base and tables and attributes and constraints
- 5- using Microsoft visual studio Implement DDL **with required constraints (PK,FK,UNIQUE, CHECK , NOTNULL)**
- **You Must Use ALTER query to Add (FK, Column, PK, other Constraints)**
- 6- EACH TABLE MUST CONTAINS:
- Insert at least in each table **TEN DATA** records, taking into your considerations determined constraints.
- 7- Finally, building simple website application using your implemented database as discussed in course and determine your website design (template) in Master page.
- 8- Identify the following pages in web application and retrieve in each page specific data using data grid view.

Website Pages description

- **First page**
 - Design an Admin login page to allow user to login to your web site
 - Each group member should have an account to login with
- **Second page (Simple Select)**
 - From your database choose 3 tables and apply a select statement on each table
 - Display each output in separated grid view.
 - Each Select Statement must contains (where & order by clause).
- **Third page (aggregate functions):**
 - From your database choose 3 (same or different from second page) tables and apply a select statement on each table
 - Display each output in separated grid view.
 - (Having, Groupby, orderby) must be covered in these statements.
 - First Select (MAX Func)
 - Second (Min Func)
 - Third (computed Attribute i.e. AGE)
- **Fourth page (SUB QUERY)**
 - Apply at least two sub-Query statement on multiple tables.
- **Fifth page (Joins)**
 - From your database choose 3 (same or different from second page) tables and apply a select statement on each join type.
 - Display each output in separated grid view.
 - First Select (Inner Join)
 - Second (outer join)
- **Sixth page : logout page**

❖ Project Instructions: -

- This is a Discussion Based Project.
- Each group Must Deliver and Discuss in Section Time ONLY.
- Project Delivery and Discussion starting from 21/5 To 25/5 ON SECTION TIME ONLY of the group.
- This project is Team of MAX (5) and MIN (3).
- Grade is (10).
- Cheating between Projects will get a (-5) Penalty.
- Late Submissions are NOT ALLOWED.
- Test your files very well before submission.

Submission Instructions

➤ Only one member will submit a compressed file for project including the following :

1- TXT file with the name of your project and Group information (IDs, Names) **For example**

- Gym Information System
- Mmm , 20181111
- Xyz, 2018222
- Abc, 2018333

2- Data Base Schema Generated from SQL.

3- Project file (Visual Studio Files of Your Project).