**DATA BASE DESIGN**

**INTRODUCTION & PURPOSE**

A database is an inherent collection of data with some inherent meanings, designed, built, and populated with data for a specific purpose. The following guidelines are been followed during the database design:

* Descriptive names for the tables, columns and indexes
* Singular names for tables and columns
* Proper data type for each column

This document describes the tables that are used to design the software, its attributes, data type, constraints, and relationship among these tables. The relationships among tables are defined via **E-R Diagram** (Entity-Relationships). A diagrammatical representation of relationships between an entity and its attributes is referred to as E-R model. ER model concentrates on the structure of the database and design of the database. ER model is mainly used in the design of the conceptual schema in database design. An **entity** may be an object with physical or conceptual existence. The properties that are used to describe the entity are called **attributes**. Entities that do not have key attributes of their own are called **weak entity type**. The relationship type that relates a weak entity to its owner is called **identifying relation** of the weak entity type. A weak entity type always has a total participation constraint with respect to its identifying relation.

# Database name: Collegenetworking

## Table name:- college

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Null** | **Description** |
| ***collegeid*** | bigint(10) | No | Id of the college |
| collegename | varchar(50) | No | Name of the college |
| collegelocation | varchar(50) | No | Location of the college |

## Table name:- image

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Null** | **Description** |
| ***imgid*** | bigint(8) | No | Image Id |
| imagname | varchar(20) | No | Name of the image |
| imgcategory | varchar(20) | No | Image category |
| description | varchar(50) | No | Image description |
| uploadimage | varchar(25) | No | Path of the image |

|  |
| --- |
|  |

## Table name:- pracdemo

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Null** | **Description** |
| ***videoid*** | bigint(8) | No | Video Id |
| videoname | varchar(25) | No | Name of the video |
| videosection | varchar(25) | No | Section of the video |
| videosubject | varchar(25) | No | Video subject |
| uploadvideo | varchar(25) | No | Path of the video |
| description | varchar(50) | No | Brief description of the video |

## Table name:- questionanswer

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Null** | **Description** |
| ***qid*** | bigint(8) | No | Question Id |
| question | varchar(50) | No | Question |
| answer | varchar(70) | No | Correct answer |
| option1 | varchar(70) | No | Option 1 |
| option2 | varchar(70) | No | Option 2 |
| option3 | varchar(70) | No | Option 3 |
| option4 | varchar(70) | No | Option 4 |
| visible | varchar(25) | No | If value of visible is true then user can answer for this question otherwise not. |

## Table name:- questionpaper

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Null** | **Description** |
| ***paperid*** | bigint(8) | No | Question Paper Id |
| Papername | varchar(25) | No | Question paper name |
| subject | varchar(20) | No | Subject name |
| section | varchar(20) | No | Student Section name |
| description | varchar(50) | No | Brief description of Question paper |
| upload | varchar(50) | No | Path of the file |
| uploadtext | text | No | Uploaded text file |

## Table name:- studentaccount

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Null** | **Description** |
| ***id*** | bigint(8) | No | Student Account Id |
| firstname | varchar(25) | No | Student First name |
| lastname | varchar(25) | No | Student Last name |
| email | varchar(30) | No | Student Email Id |
| password | varchar(30) | No | Password |
| confirmpassword | varchar(30) | No | Confirmation password |
| iam | varchar(10) | No | Gender |
| dob | Date | No | Date of Birth |

**Entity Relationship Diagram (ERD)**

The Entity Relationship Diagram depicts the various relationships among entities, considering each object as an entity. Entity is represented as ellipse and relationship is represented as decision or diamond box. It depicts the relationship between data objects.

***Entity***:- The thing, which we want to store information. Entity is a elementary basic building block of storing information about business process. An entity represents an object defined within information systems about which you want to store information.

***Attributes***: - Descriptor of the entity. Attributes are elementary pieces of information attached to an entity.

***Relationship: -*** A relationship is a named connection or association between entities or used to relate two or more entities with some common attributes.

***Types of Relationships***:

* **One to One**
* **One to many**
* **Many to one**

##### *ER (Entity-Relationship Diagram) and Database design*

The database for our system and its design using ER diagrams is shown in the figure bellow.

Some of the conventions while designing the E-R Diagram are shown below.

|  |  |
| --- | --- |
| Symbol | Convention |
|  | *Entity* |
|  | *Relationship* |
|  | *Attribute* |
|  | *Key Attribute* |