Scholarship Help Portal

Documentation for DBS_PR_08

Project by Archaj Jain (2020A7PS0072P) and Sarthak Shah (2020A7PS0092P)

1) System requirement specification (SRS)

So the queries on database are based on sql so mysql would be a requirement.

The main code is in python so a python compiler would be required and any editor to run and see.

We have created the gui on a module called tkinter it is also in python and you need to install it to run the code.

Also finally we have connected gui to database using mysql connector so you would would also need to install this to appropriately run the code.\

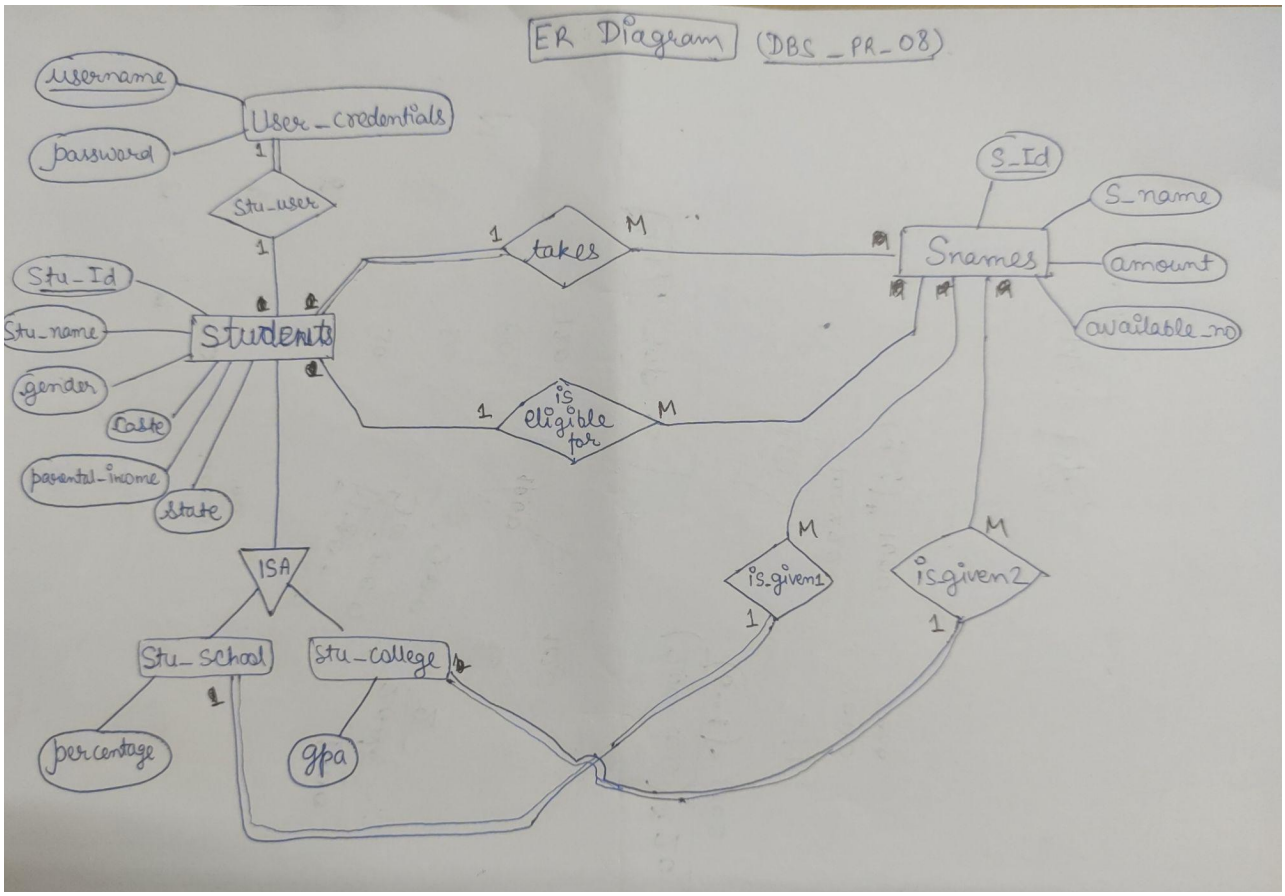
Also a two input would get changed while using mysql connector depending on your system i.e. the username password of your schema, I have explained it in video as well.

2) System Modeling

1) Entity-Relationship Diagram

The below picture shows the ER diagram for our project.

We incorporated 2 broad entities in our diagram i.e. Students and Snames (Scholarship_names) and we have a Users entity such that all Students are some Users. Also our Students can be either of type School students or College students with different criterion of marks for taking the Scholarship.



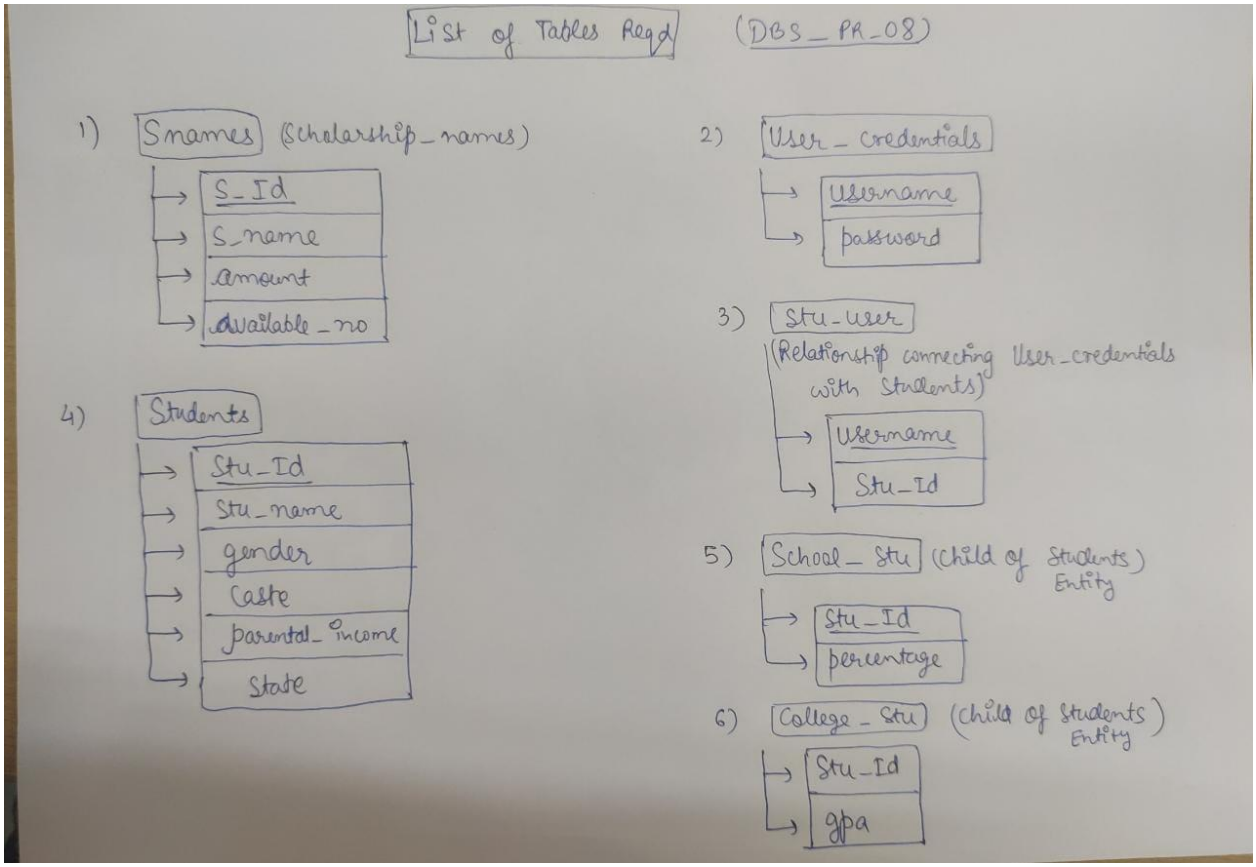
2) Schema design

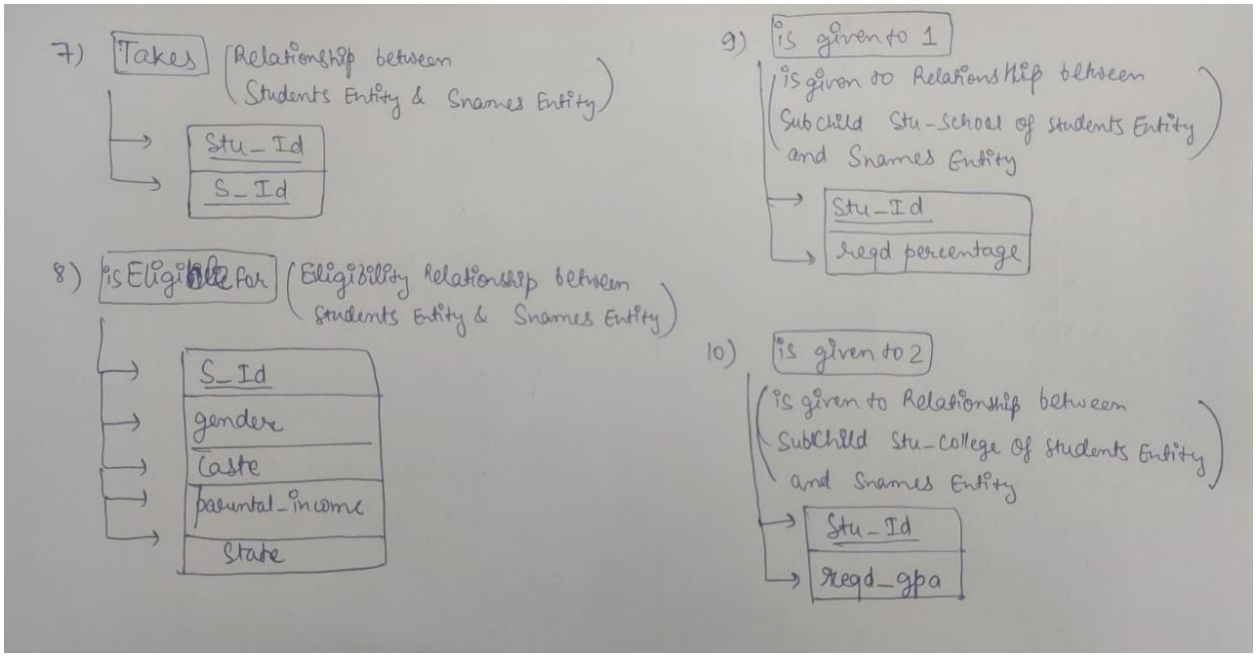
Below picture shows the Physical schema design of our Database.
All the 10 tables of which Snames, User_credentials, Students, School_stu and College_stu are our entities and the rest are the required relationship between entities.
Underlined attributes are the Primary key of that table.
The Logical schema can be designed using the Physical schema and the ER diagram.

Schema Design (DBS_PR-08)

1) Snames (S_Id , S_name , amount , available_no)
2) User_credentials (username , password).
3) Stu_user (username , stu_Id)
4) Students (Stu_Id , stu_name , gender , caste , parental_income , state)
5) School_stu (Stu_Id , percentage)
6) College_stu (Stu_Id , gpa)
7) is given to 1 (S_Id , reqd_percentage)
8) is given to 2 (S_Id , reqd_gpa)
9) Eligibility (S_Id , gender , caste , parental_income , state)
10) Takes (Stu_Id , S_Id)

3) List of tables required





4) Data Normalization

Our model is in BCNF form, as there are no partial and transitive dependencies present in any table. In maximum table s_ID or stu_ID is primary key and no other attributes are dependent on each other.

5) Additional Components

We have not used functions and procedures in queries as queries were not repeating quite a much.