GROUP PROJECT:

OUTLINE & REUIRTMENTS

Documentation

SYSTEMATICAL PARADIGM MEMBERS:

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Table of Contents

I.) Database initial study :

i.) An analysis of the company's current situation –

The system we are designing does not have a database in its current state as it is not aimed at an existing company but a type of informal business-like flea markets or 'on the street' markets. We are creating a system for students or young upcoming entrepreneurs who want to sell their used books and study material to other university students. The books or items are sold via a cash transaction, as it is not sold via a business but by the students themselves. They do not use databases to keep track of information of their sales nor their clients. It is also seldom that they have the 'high in demand' books available. Some books are not available on that particular institute or premises. Thus, without any proper information tracking and stock the young upcoming entrepreneurs lose protentional customers and income.

We have however researched companies that sell and publish books, books for reading and books for further studies. How they go to work with they're database management and keeping their data / information accurate and prevent redundancy.

ii.) Defined problems and constraints –

- Some possible problems that could occur, even though there no database as of yet, while using the database is false or incorrect information is fed into the database by the users as it is not only used by seller but by the buyer as well. With incorrect data / information about the study material and/or books from the seller or incorrect data / information about the buyer it breaks and misses the point of the entire system. Incorrect information about study materials or books could lead to a buyer not buying what they wanted and the seller getting bad reviews.
- As we are developing a system for students and/or upcoming entrepreneurs it is still a necessity to use a proper developed database platform that is not over complicated but also does not corrupt easily and handle big amounts of data. Having a over complicated or insufficient database could be a big constrain as a lot of data could be lost or corrupted.
- A constraint is not having enough support towards the DBMS. As the system is handed to the users to use there is little change that could be made to the database to correct errors or improve without disrupting the system.
- The version of the users' operating software, of the computer used, could have a big effect on determining which database platform to use. As not all platforms are compatible with older OS's.

- Not having the correct relations between the different tables in the database could cause low to no performance of the system and reporting or tracking would not be possible.

iii.) Defined objectives –

The main objective our database is to capture as much trustworthy information / data about the users and the items they are selling or put up for sale. Reassuring buyers that what they are looking for will be regularly available and the correct item description. The system aims to have data integration and independency but most of all data integrity. The system aims to centralize all the data / information a one point with data integration, as we are using an Azure SQL server which is an online hosted database server. For the purpose of our system data integrity is very important as it determines the reliability of the system. A system which is not reliable would not be used by the users.

The main objective of our system as a whole is to reduce the amount of students or entrepreneurs struggling to sell their second hand or new books / study materials. To automize the process and help the seller to find a buyer to buy their items. It also eases the searching process for books and other study materials.

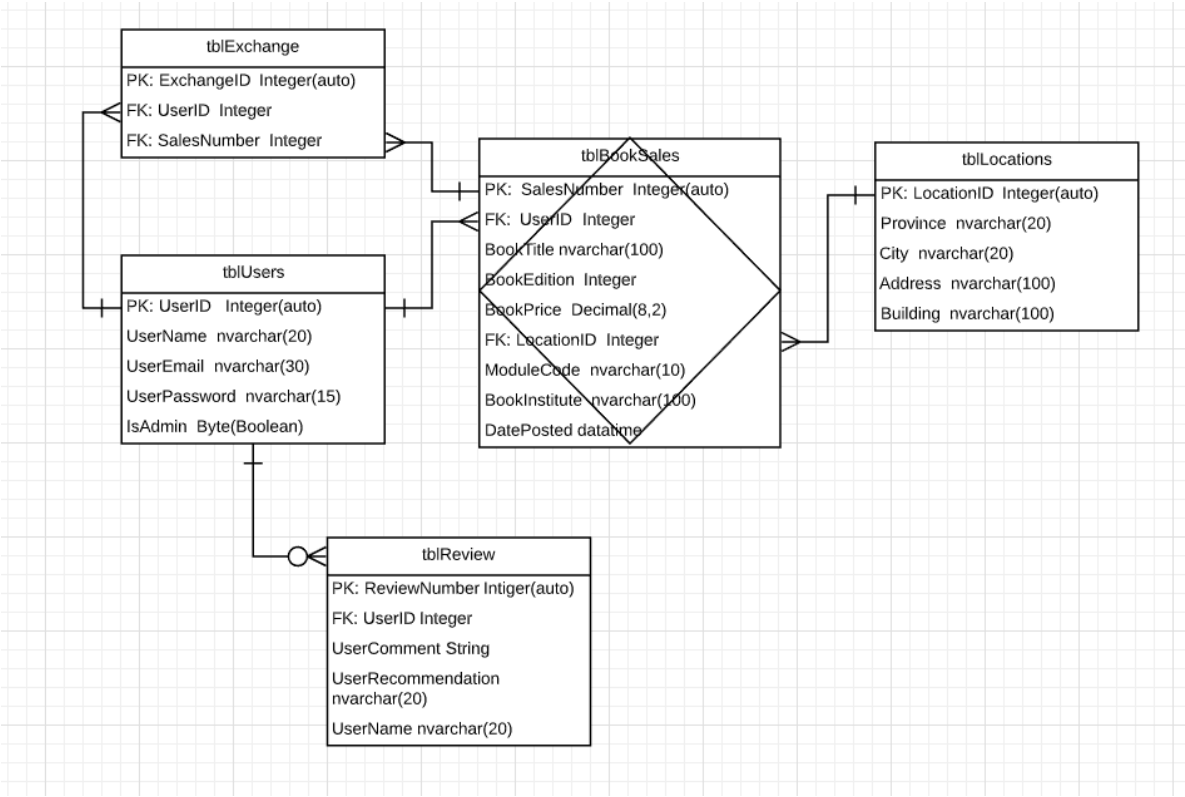
iv.) Defined scope and boundaries –

Scope : The actors / stakeholders that will be involve in our system is the students and/or entrepreneurs that are the users and we have a full team which will analyze, design, build and maintain the system. Our external service provider would be the hosting service. The system is dependent on events outside of itself, it depends on the users adding or removing data / information from or to the database. Users add themselves where they then could either add a book to sell it or buy the book that is up for sale. A review of the seller could be written to give the seller a trust rating. The system is based on an online web application to interact with the users(Stakeholder). The goal is to reduce the amount of students selling their secondhand books and study materials on campus outside of main building to zero and help outomize selling of the students' / entrepreneurs' books.

Boundaries : As it is a live hosted web application a laptop, desktop computer or a smart device with internet connection is needed in order to use the application. It is also not aimed at larger or commercial companies but to aid the students or entrepreneurs that are struggling to sell their used / secondhand books and study materials.

2.) Database design :

i.) Conceptional design –



ii.) DBMS software selected –

We selected an Azure SQL database server which we are going to host the in visual studio's server object explorer.

- ***Advantages –***
  - ≈ The integration between visual studios and blazer is easy to use
  - ≈ It is free of charge, can be used without payment.
  - ≈ It is easy to use but challenging enough to do research about.
  - ≈ Multiple users can access the database remotely through secure logins.
- ***Disadvantages –***
  - ≈ The database becomes a paid service after the space limit has been reached.
  - ≈ Internet speed (bandwith) is limited to 10Mbs, because it is a stander subscription / plan.

- ≈ Renaming the tables is causing issues and is quiet difficult once the table is created.

iii.) *Logical design* –

iv.) *Physical design* –