**3. Design**

**3.1 Introduction:**

Design is the process of creating something on the basis of some perspectives. Generally design is done looking at the user perspective and needs. Design is different by looking at the things you are developing and requirements. Design is very necessary in any development. It is the 1st impression of any sort of program or application.

Benefits of designing:

* It sets the impression towards the customers or users.
* Sometimes a good design may provide a trust from user/customers.
* Its helps user to use the application with ease.

**3.2 Structural design**

Structural design is the method of investigating the strength, stability and rigidity. Generally we do it for looking the structural view of the system. Structural design also supports the architectural design.

Class diagram, Data flow diagram and flowchart are some examples of structural design.

For my project, I have made class diagram to find out the structure of my project.

**Class diagram:**

Class diagram is the static diagram which also represent the static view of the project. For my project I have made the class diagram to see the static view and how it will work. Class diagram also helps to analyze and design the static view of the application.

**Justification of my class diagram:**

I have made the class diagram by considering the future stability. After the register is done user can easily order the books with the categories they like. Also user can give the review of the books.

**Notation uses:**

*Aggregation notation:* This notation is used to configure the objects for making the complex type of object.

*Composition notation:* This notation is used for the composite objects.

*Association notation:* This type of notation is used to inter-relate the class.

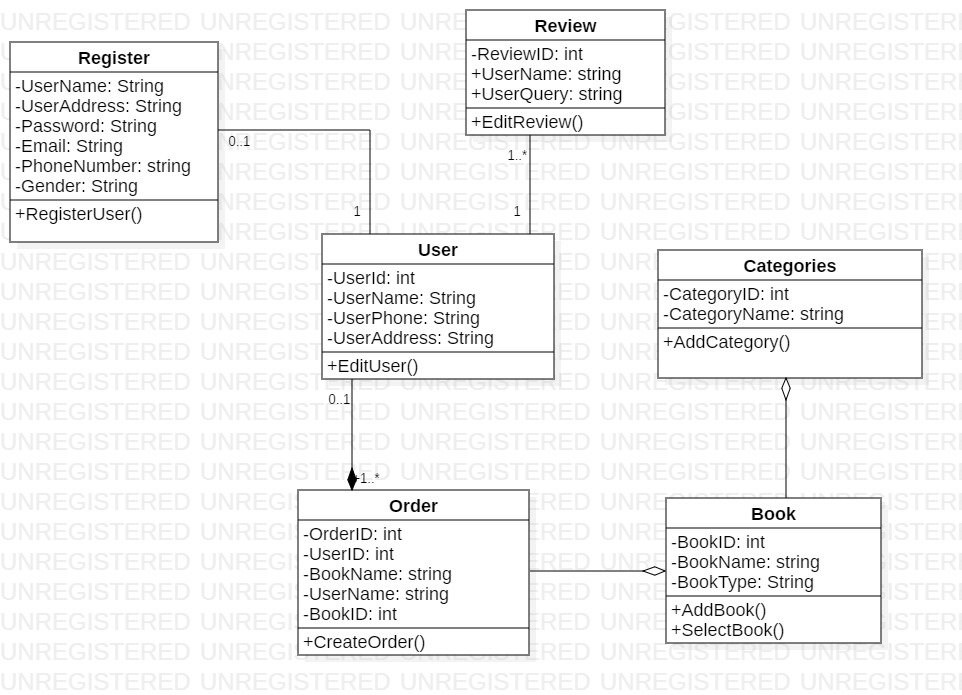


Fig: Final Class diagram

**Explanation:**

My class diagram consists of 6 classes which is very important for developing the project. First of all, use will register themselves with the name, address and contact number. After the registering they can order the books with different categories of their interest. After registering themselves, they can also review the books, after they read it.

**DFD:**

DFD is the type of structural design. DFD is the known as the Data Flow Diagram. This diagram shows the flow of the data or process. Data Flow Diagram also provide the information about the outputs.

For my project too, I have made the data flow diagram to analyze the flow of my information. This diagram will give the enough knowledge to others about how the data will flow.

**Justification:**

Data flow diagrams are used to graphically represent the flow of data in a business information system***. (data-flow-diagram, 2019)***

DFD is very essential to my project because it shows the path of the program and how it will be working after the program is made.

**Notation used:**

*Process Notation:* This notation helps to transfer the incoming data flow into the out going data flow.

*Data stores Notation:* This notation are the repositories of the system.

*Data flow notation:* This notation helps to find the flow of data in what direction.

*External entity notations:* This notation gives a clue about the objects outside of the system.

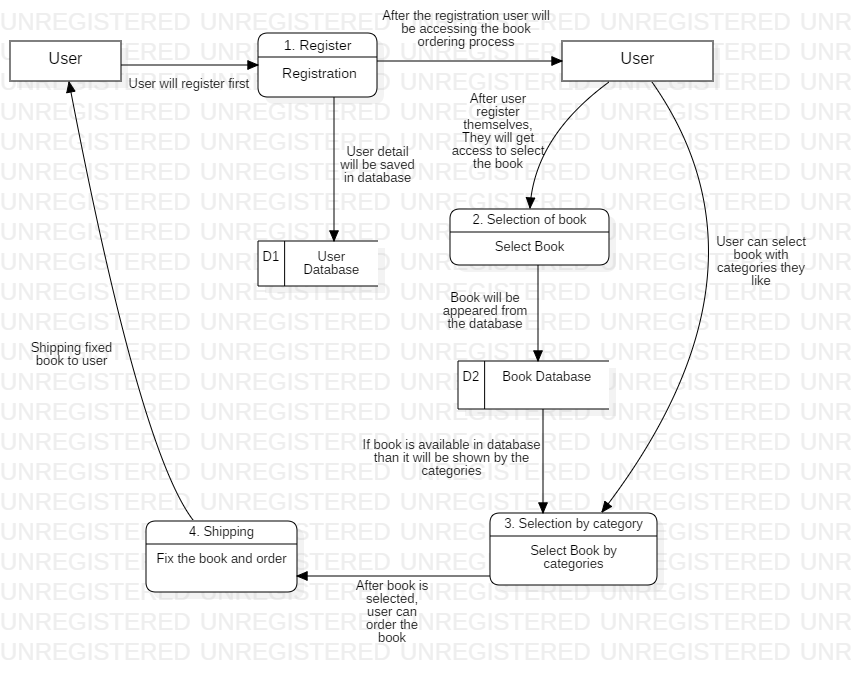


Fig: Data Flow Diagram

**Explanation:**

In this data flow diagram, User is the initial entity. User will be registering themselves before selecting the book. After the user will be registered, data will be saved in the database of the users. After the user data will be on the database, user can select the book. User can also select the book with the categories. The categories of the book will be appear from the book database. After the book will be selected by the user of their interest than book will be ordered than will be shipped to the user.

**3.3 Behavioral Design**