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# **Design Document**

**for**

# **Learning through interactive visualization**

**Version 1.3.1**

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# 1. Introduction

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## 1.1 Purpose

Design Specifications for implementing an Android based application for virtual experience of the topic being delivered by a lecturer on basics of computer system.

## 1.2 Intended Audience

This design document is intended for developers and testers. All the specified features are of higher priority. **Developers** should study the sections, 'Design and Implementation Constraints', 'Assumptions and Dependencies', 'User Interfaces', and 'System Features'. **Testers** should study the implemented application and detect all the bugs in the application

## 1.3 Product Scope.

This app will provide the 3-D visualization of the computer system components. Visualization will help in understanding the topic in better way by providing each micro details of the component.  
This app will be help student as well as teacher.

## Data Dictionary

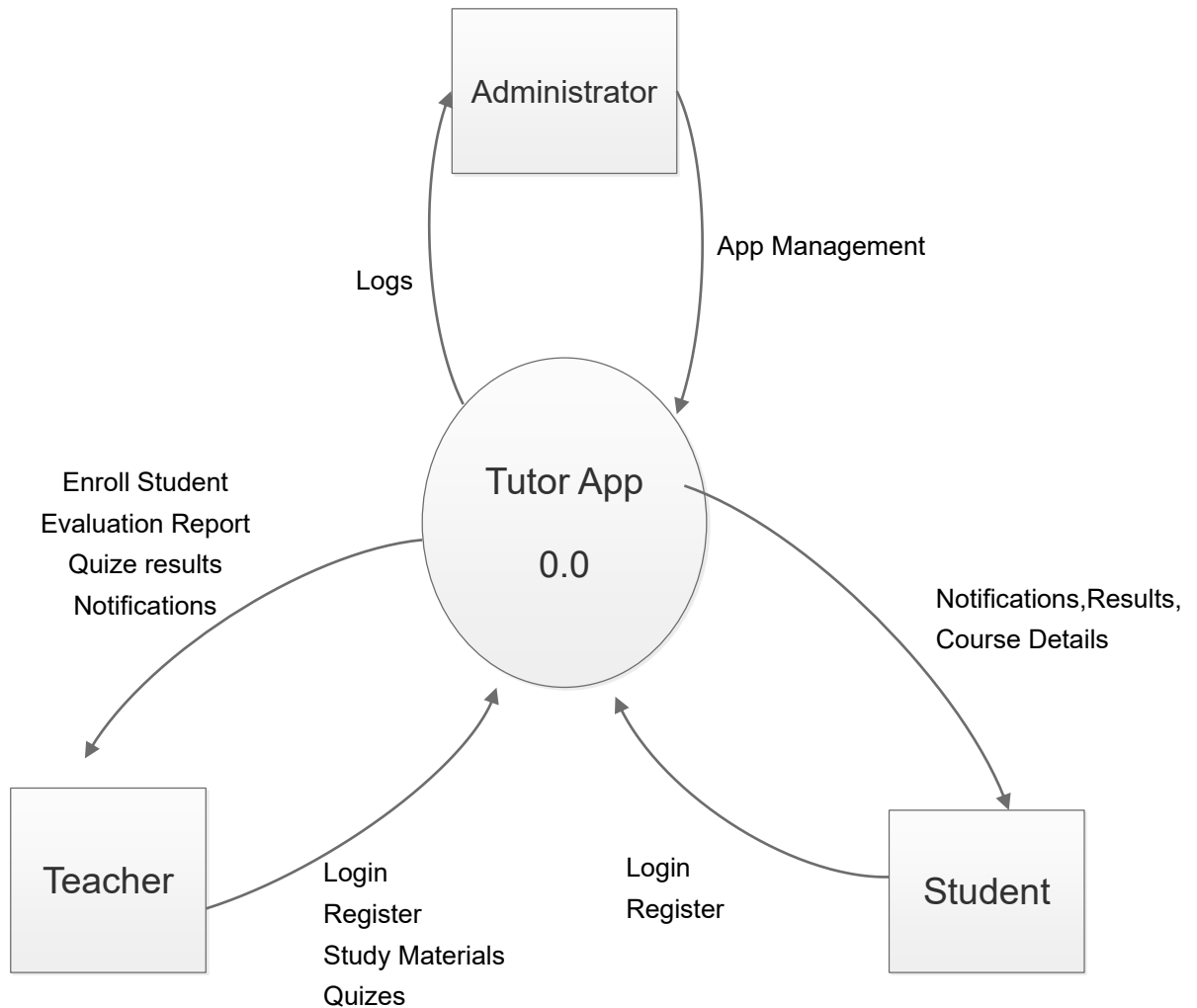
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- **Administrator** - Developer of the application.
- **App Management** – Bug fixes, regular updates.
- **Notification** – Reminders about quizzes, app updates, Evaluation report by the teacher.
- **Results** – Evaluation of your answer script along with solutions to the quiz.
- **All courses** – List of all available courses and their details
- **My courses** – All courses student is registered in.
- **Register** – Registration of the new user in the App's Database.
- **Login** – Authentication of the registered users.
- **Study Materials** – Learning materials uploaded by the teacher.
- **Quizzes** – Short length exams conducted by the teacher as per his convenience
- **Enroll Student** – Validating a student's enrollment in a course.
- **Evaluation report** – Detailed Descriptive report of a student, highlighting his strong and weak topics.
- **Quiz results** – Evaluation of the answer scripts of the student.
- **Logs** – Catalogue of all traffic on the network.
- **Labelling** – Labels for subparts of model.

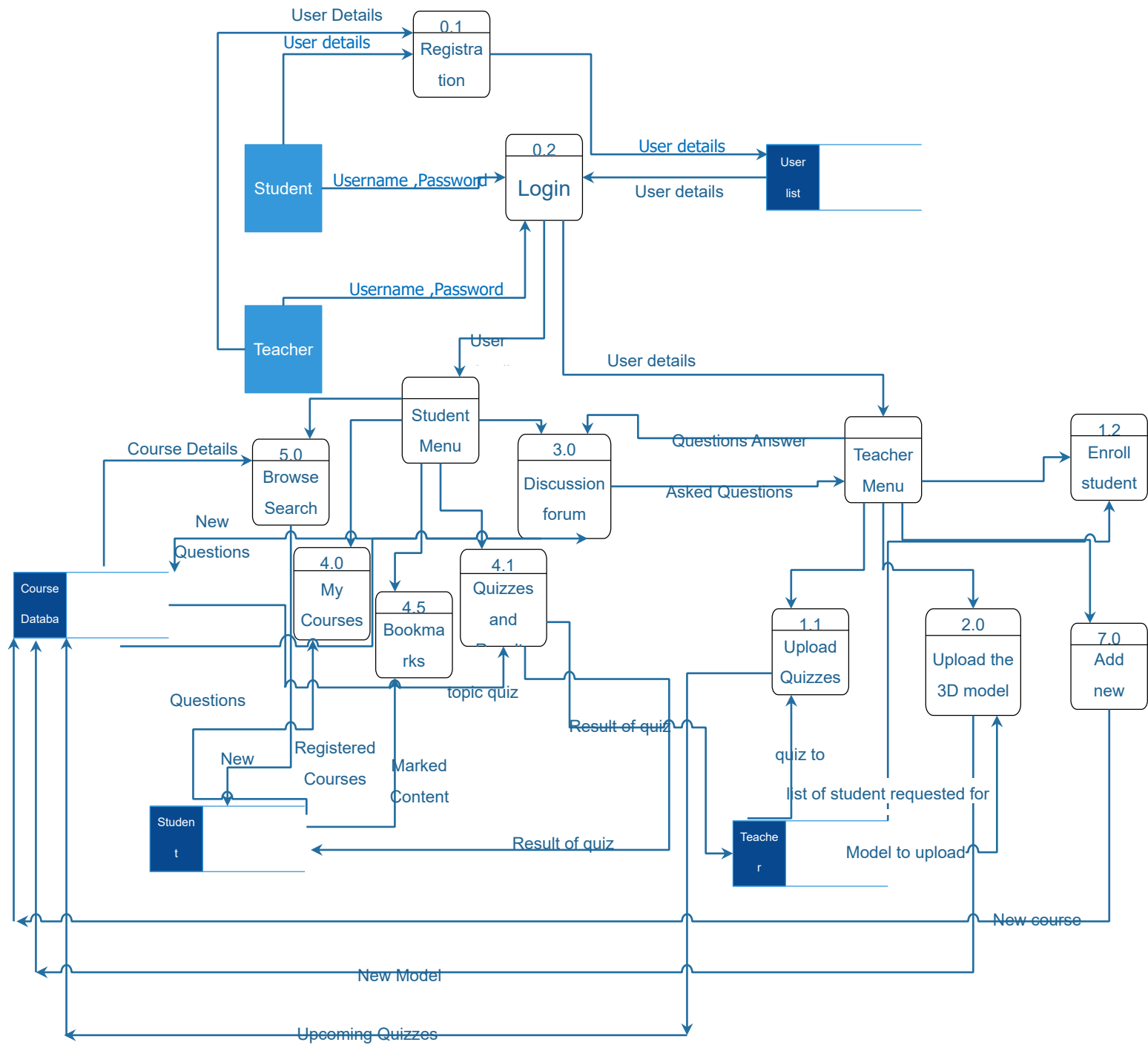
- **Mouse based interaction** – Zoom, rotate, read content features in the app.
- **Upvote/Downvote** – Vote based rating of the solutions.
- **Resume** – Resumption of the course from where you last left.
- **Bookmark** – Shortcut for your favorite courses

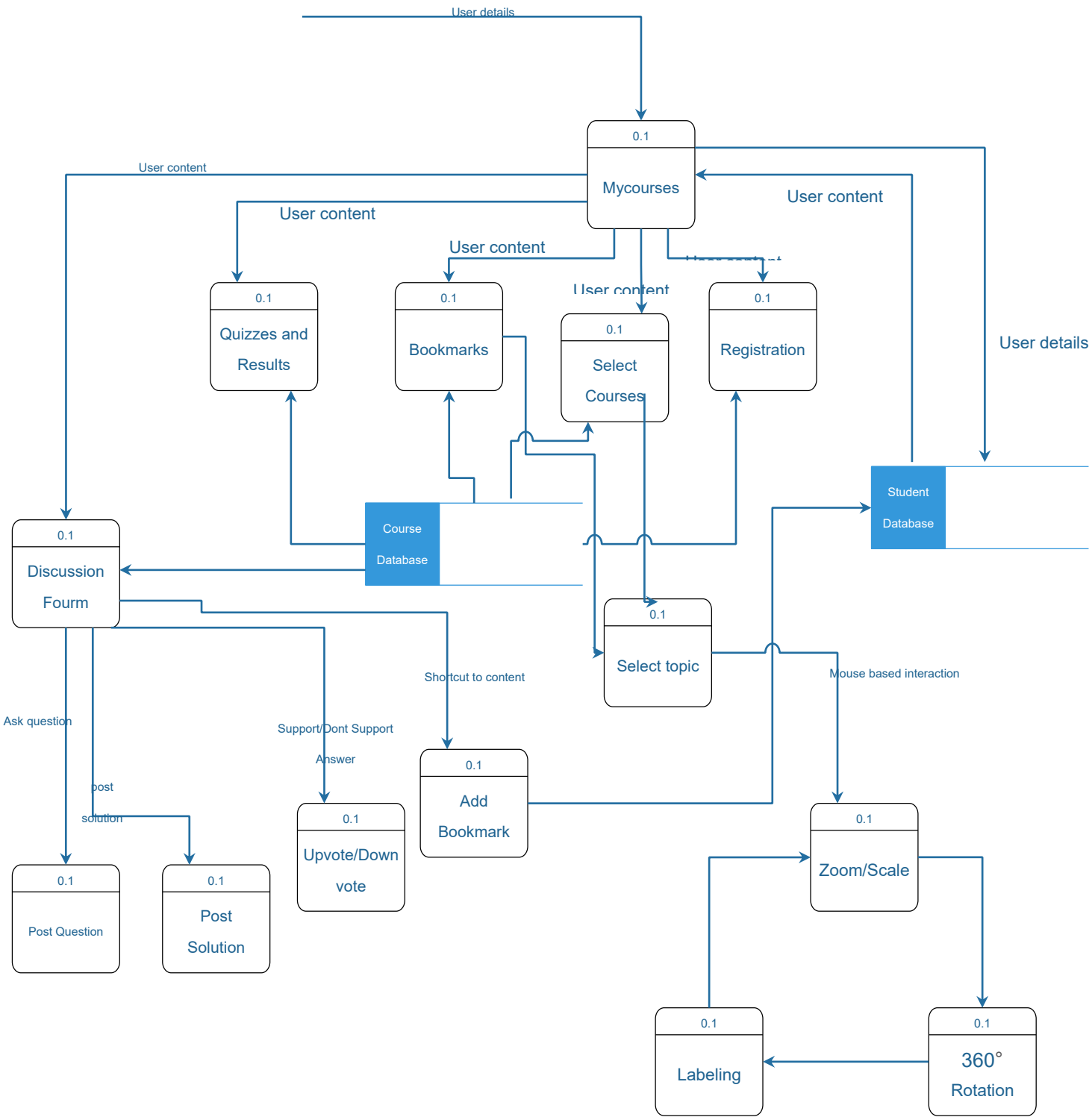
## Level 0 DFD

### Contextual Level Diagram

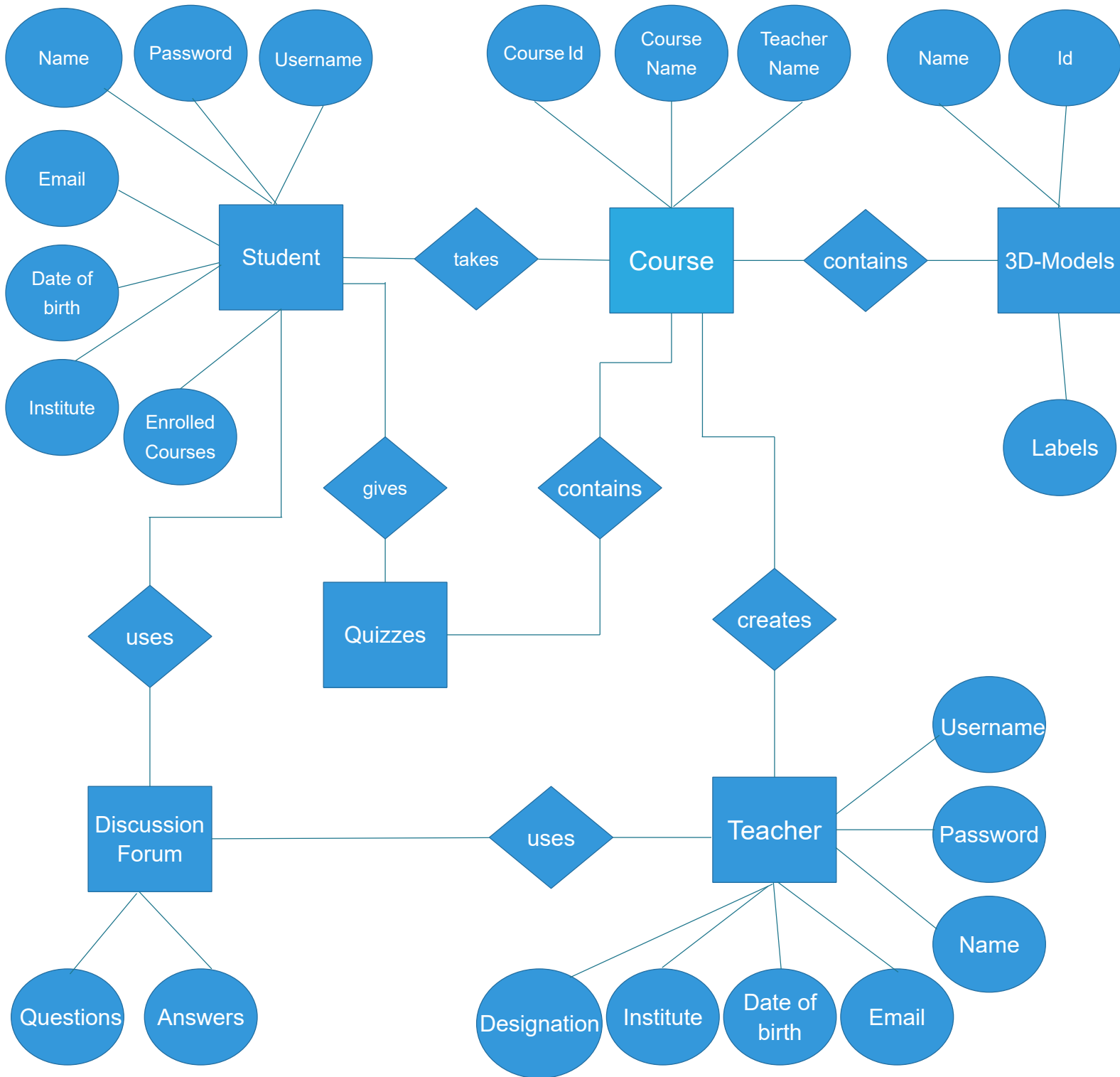


## Level 1 DFD

Level 2 DFD





Entity Relation Diagram

## Design Document for Learning Through Interactive Visualization