Indian Institute of Technology
Bombay

CS 387 :
Database and Information Systems

Project: Querifier

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Contents

1 Objective **1**

2 Functionality **1**

3 Input-Output **2**
- 3.1 Input Format . . . 2
  - 3.1.1 From Students . . . 2
  - 3.1.2 From Instructor . . . 2
- 3.2 Output Format . . . 2

4 Interface Design **2**
- 4.1 Index page . . . 2
- 4.2 Student page . . . 3
- 4.3 Instructor page . . . 4

5 ER Model **6**

6 Algorithm Design **8**

7 Schema Design **10**

8 References **10**

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1 Objective

To create an interface for students to submit queries and verify the submitted queries with the desired result as per the query provided by the instructor.

The crux of the problem is in determining whether or not a pair of queries will produce identical result sets for ALL the data sets and not just a particular data set. This will require running the queries on a set of test data sets and comparing the results. Thus, generation of these test data sets is very important which will ensure the correctness of the queries.

2 Functionality

The program determines if the query submitted is correct using the aforementioned approach. The grading will be done once this verification is done and also the data set on which the query failed is determined. Two modes are offered : learning and grading. In learning mode, the query will be checked

immediately on submission and feedback will be given. The instructor can manually change the grades later.

3 Input-Output

3.1 Input Format

3.1.1 From Students

- Queries as answers for the questions asked in the given sql problem.

3.1.2 From Instructor

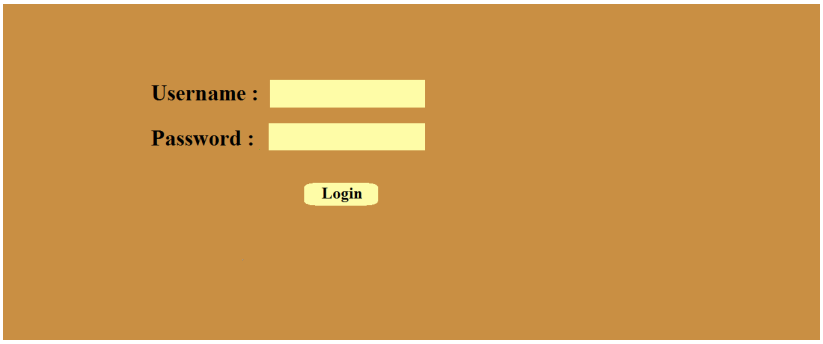
- Questions with model answers.
- Deadline for submission and mode selected (learning or assignment)
- Schema definitions with url and password to access the database.
- Manual altering of grades.

3.2 Output Format

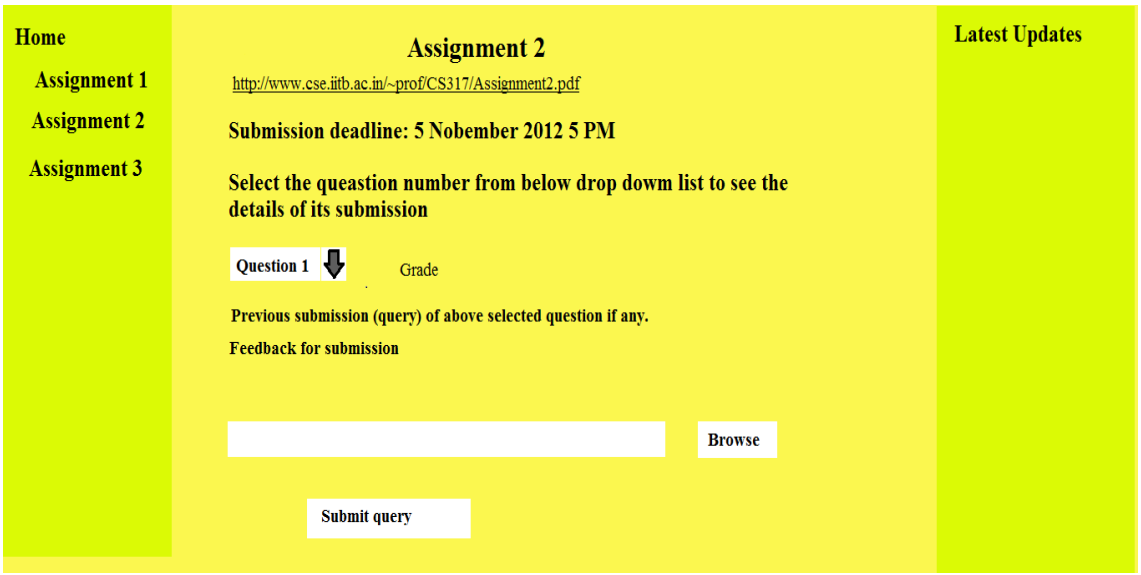
We will provide detailed feedback on queries submitted by the student along with data sets on which the query failed. We will show the uploaded assignment to students and also, after the deadline is over, show the model answers.

4 Interface Design

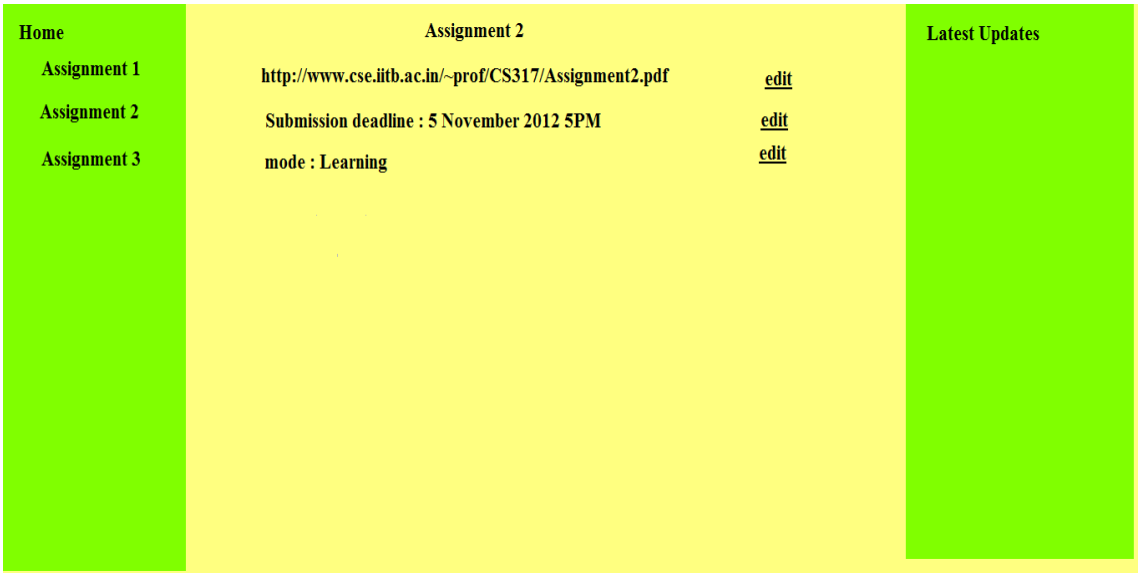
4.1 Index page

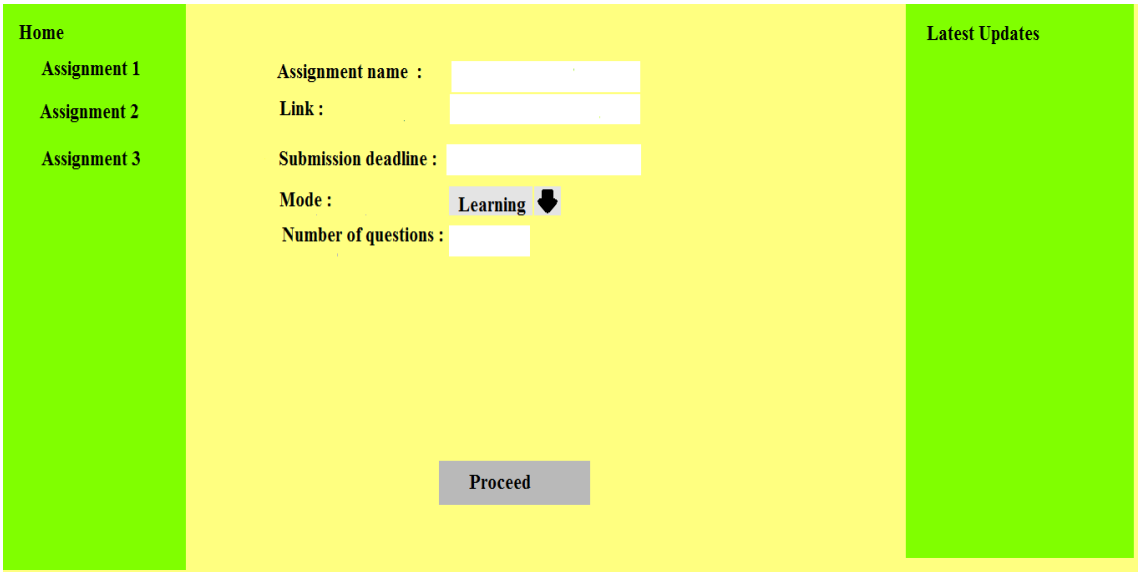


4.2 Student page



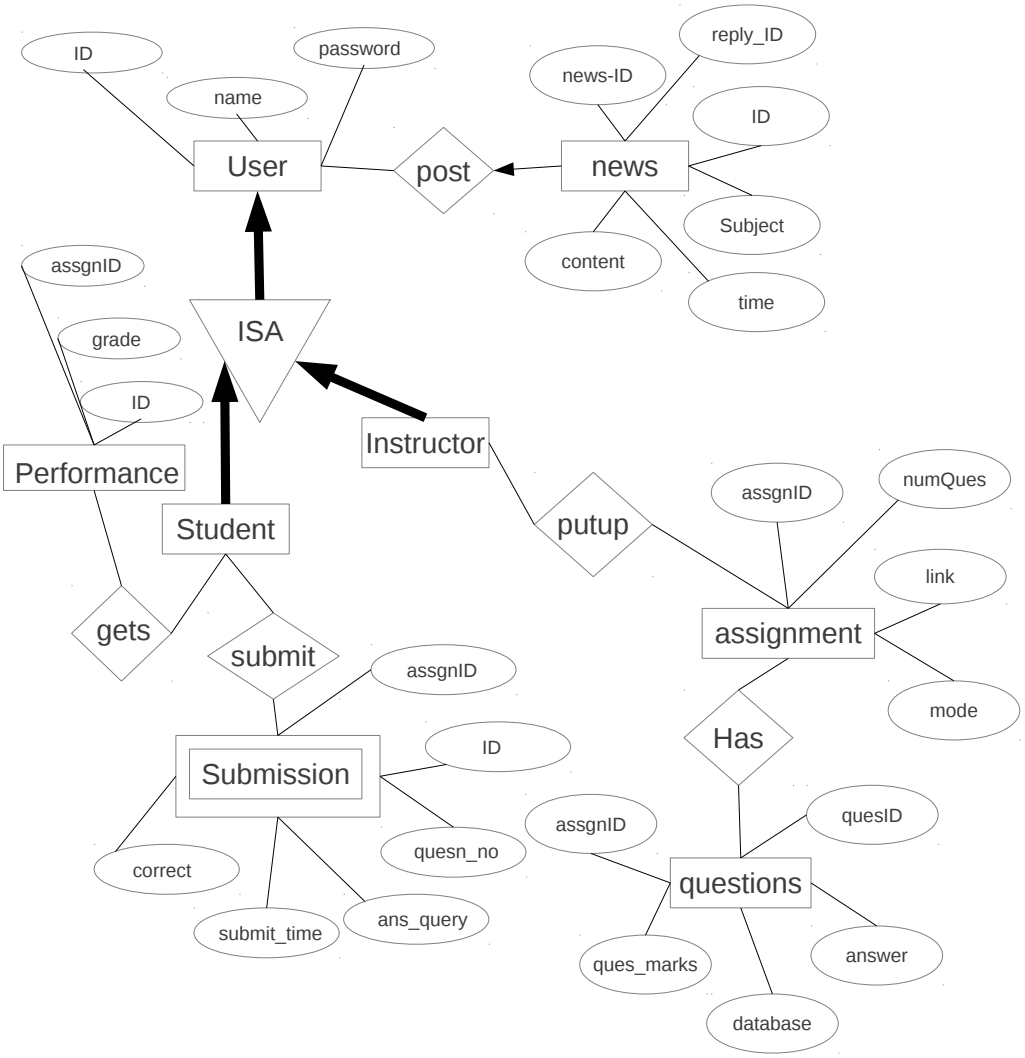
4.3 Instructor page



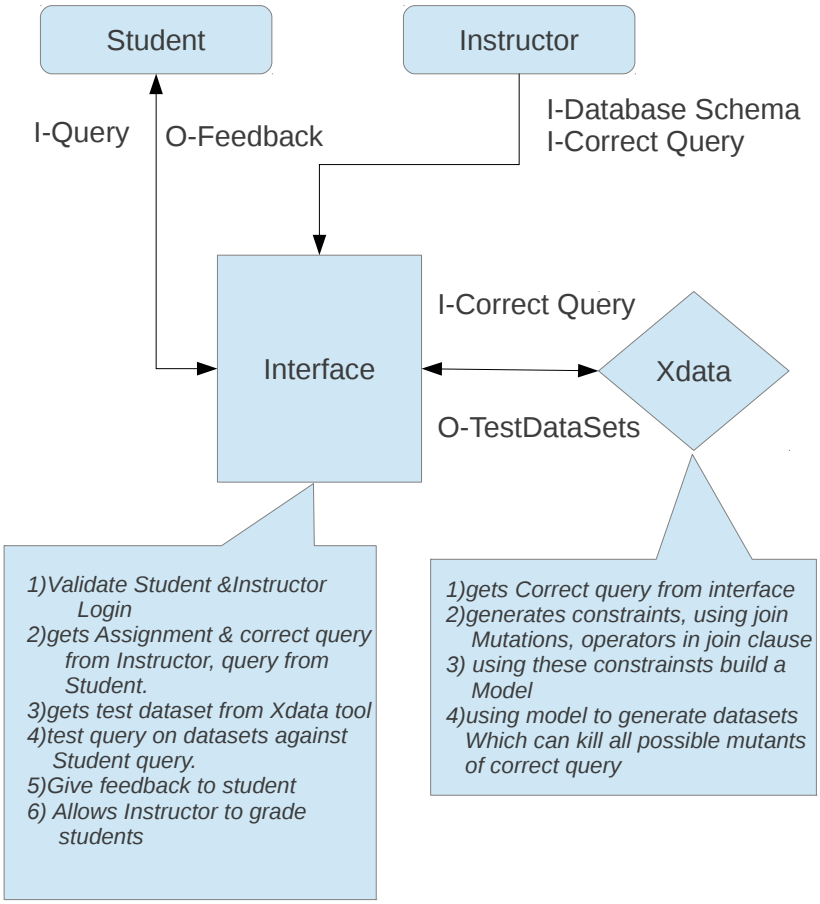

Home
Assignment 1
Assignment 2
Assignment 3
Assignment name :
Link :
Submission deadline :
Mode :
Learning
Number of questions :
Proceed
Latest Updates


Home
Assignment 1
Assignment 2
Assignment 3
Query for question 1 :
Submit
Latest Updates

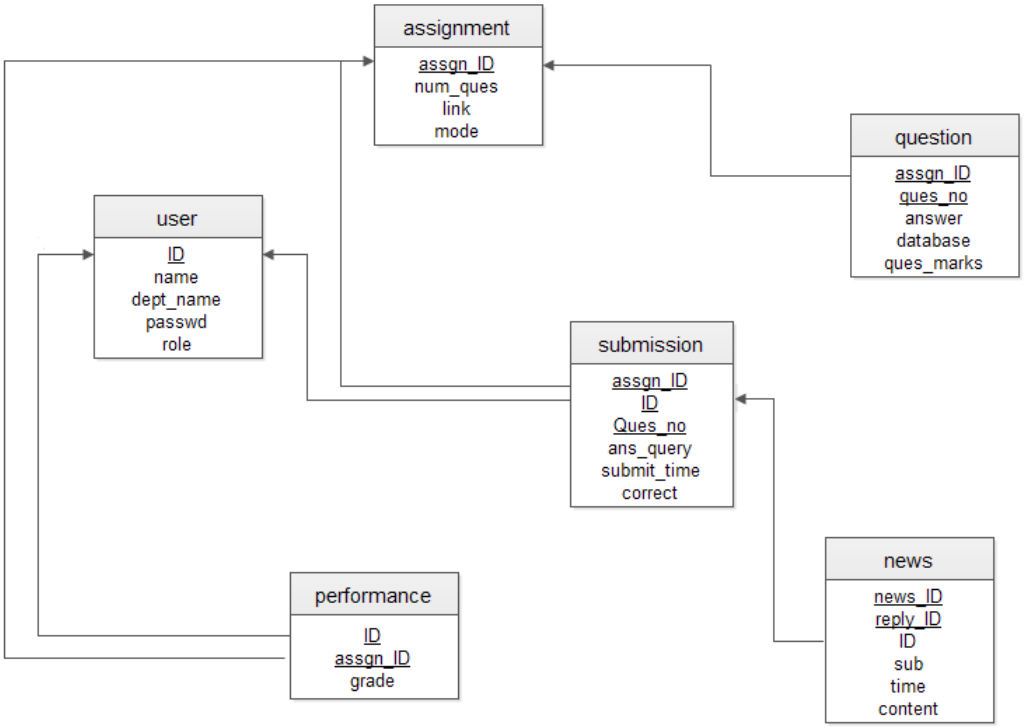
ENTITY-RELATIONSHIP DIAGRAM



Algorithm Flowchart



5 Schema Design



6 References

- LaTeX