

M-am gandit la urmatoarea structura a aplicatiei (Frontend/layout):

2 zone de lucru (left sidebar si main)

1) **left sidebar** --- Zona pentru invatare asistata. Prezinta informatii structurate pe capitole/notiuni care pot fi alese prin selectie

Impartita in 3 subzone:

- a) informatiile din cursul/carte/carti structurate pe capitole/notiuni/unitati de invatare
- b) subzona de evaluare pentru fiecare din capitolele/notiunile/unitatile de invatare plus, evaluare all curs/carti
- c) subzona de sondaj/chestionar pentru evaluarea utilizarii aplicatiei de Chatbot

### 1) Topics

Virtual assistant for learning SQL/PLSQL

Topics

Course 1 - SELECT

Course 2 - INSERT

Course 3 - JOIN

...

Course n

Assessments/Grader

Course 1 - SELECT

Course 2 - INSERT

Course 3 - JOIN

...

Course n

Survey/Questionnaire

Chatbot:

An **index** is a data structure used in databases to improve the speed of data retrieval operations. Much like an index in a book, a database index allows the database engine to find rows more quickly without scanning the entire table.

Example 1:  
CREATE INDEX **idx\_last\_name** ON students(**last\_name**);

Example 2:  
CREATE INDEX **idx\_lastname\_grade** ON students(**last\_name**, **grade\_level**);

You:

What is an index?

Chatbot:

Creating a table in SQL involves defining the table structure, including the columns, their data types, and constraints.

Example:  
CREATE TABLE students (  
    **student\_id** INT PRIMARY KEY,  
    **first\_name** VARCHAR(50) NOT NULL,  
    **last\_name** VARCHAR(50) NOT NULL,  
    **email** VARCHAR(100) UNIQUE,  
    **enrollment\_date** DATE,  
    **grade\_level** INT CHECK (**grade\_level** BETWEEN 1 AND 12)  
);

You:

How to create a table?

### 2) Zona principala de dialog:

a) la selectia tipului de dialog (invatare asistata / evaluare) incepe dialogul cu utilizatorul precizand, la inceput cateva elemente pentru stabilirea modalitatii de lucru:

- stabileste o structura a bazei de date de lucru (ex. Studenti / Profesori / Cursuri / etc...)
- raspunde la intrebari specifice
- ofera exemple aplicate pe baza de date de lucru

## 2) Assessments

Virtual assistant for learning SQL/PLSQL

Topics

Course 1 - SELECT

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...

Course n

Assessments/Grader

Course 1 - SELECT

Course 2 - INSERT

Course 3 - JOIN

...

Course n

Survey/Questionnaire

Chatbot: Which of the following SQL statements returns all 11th grade students?  
A) `SELECT * FROM Students WHERE grade_level = 11;`  
B) `SELECT * FROM Students WHERE grade_level = '11';`  
C) `SELECT * FROM Students WHERE grade_level > 11;`  
D) `SELECT * FROM Students WHERE grade_level != 11;`

You: A) `SELECT * FROM Students WHERE grade_level = 11;`

Chatbot: Great job!  
  
A) `SELECT * FROM Students WHERE grade_level = 11;`  
Option A is correct because it returns all students where `grade_level` equals 11.  
  
Your score for now is: 10 points

b) pentru varianta de invatare asistata, ofera posibilitatea de introducere cod (zona de tip Sandbox), care este verificat(evaluat) de AV si precizeaza gradul de corectitudine si ofera hint-uri de modificare astfel incat sa obtina rezultatul corect

### 3) Survey/Questionnaire

Virtual assistant for learning SQL/PLSQL																																							
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c) pentru varianta de evaluare, ofera posibilitatea de:

- introducere a variantei de raspuns
- sau a unei scurte secvente de cod care va fi evaluata/confirmata sau nu ca fiind corecta
- sau raspuns de tip True/False

Dupa fiecare raspuns (sau la sfarsit) se calculeaza punctajul intermediar.