

## Task 7: Creating & Using Views for Student Scores

This task focuses on **simplifying data analysis** by using **SQL views** to store reusable query logic.

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### Objective:

- ◆ **Enhance database efficiency** by creating views for **student scores** and **pass status**.
  - ◆ **Reuse queries** without rewriting complex SQL statements.
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### Project Steps:

#### 1. Setup Database & Tables

**Create and populate tables** (e.g., `students`, `scores`).

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#### 2. Tasks to Perform

##### ① Create a View for Student Scores

 **Objective:** Store student names and scores for easier access.  
 **Query:**

```
CREATE VIEW student_scores AS  
SELECT s.student_id, s.name, sc.subject, sc.score  
FROM students s  
JOIN scores sc ON s.student_id = sc.student_id;
```

 **Usage:**

```
SELECT * FROM student_scores;
```

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##### ② Create a View for Students Who Passed All Subjects

📌 **Objective:** Show students who passed all subjects (e.g., passing score  $\geq 40$ ).

📌 **Query:**

```
CREATE VIEW passed_students AS
SELECT student_id, name
FROM students
WHERE student_id NOT IN (
    SELECT student_id FROM scores WHERE score < 40
);
```

📌 **Usage:**

```
SELECT * FROM passed_students;
```

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### 3. Execution & Validation

- ✓ **Run queries sequentially** to create views.
  - ✓ **Verify results** by selecting data from views.
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### 4. Documentation & Reporting

📌 **Include the following:**

- ✓ **Screenshots** of SQL queries and outputs.
  - ✓ **Explanations** of each query's purpose.
  - ✓ **Summary of findings** (e.g., number of passing students).
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#### Final Deliverables:

- ✓ **Reusable views for student scores & pass status.**
- ✓ **Validation with sample queries.**
- ✓ **Documented findings for analysis.**

Would you like to extend this with additional views for subject-wise performance or ranking? 🚀

#### Deadline Compliance

- **Restriction:** Submit the project within 7 days from the start date.
- **Reason:** Meeting deadlines is crucial in the real-world software development environment. This restriction helps students practice **time management** and **task prioritization**. In professional settings, tight deadlines are often the norm, and learning to meet them without compromising quality is an essential skill.
- **Learning Outcome:** Students will learn to manage their time effectively, complete projects under pressure, and **deliver results on time**, which are all important skills in the workplace.