Virtual Classroom Manager Programming Exercise

Problem Statement Imagine you are developing the backend for an EdTech platform that aims to host virtual classrooms. Your task is to create a terminal-based Virtual Classroom Manager that handles class scheduling, student attendance, and assignment submissions.

Solution

Add Classroom

Output

	virtual_classroom (run) ×	virtual_classroom (run) #2 ×

```
run:
Enter command:
add_classroom English
Classroom English has been created.
Enter command:
|
```

Classroom stored in database

			id	name
☐	✎ Edit	┋ Copy	⊖ Delete	1	Maths
☐	✎ Edit	┋ Copy	⊖ Delete	2	Science
☐	✎ Edit	┋ Copy	⊖ Delete	3	Hindi
☐	✎ Edit	┋ Copy	⊖ Delete	4	Gujarati
☐	✎ Edit	┋ Copy	⊖ Delete	5	English

Add Student

Student stored in database

				id	student_id	classroom_id
☐	🖊 Edit	📋 Copy	⊖ Delete	1	1	1
☐	🖊 Edit	📋 Copy	⊖ Delete	2	2	1
☐	🖊 Edit	📋 Copy	⊖ Delete	3	3	2
☐	🖊 Edit	📋 Copy	⊖ Delete	4	4	5

Schedule Assignment

Assignment is stored in database

←T→				id	classroom_id	details
☐	🖊 Edit	⌗ Copy	⊖ Delete	1	1	Assignment is of 1hrs
☐	🖊 Edit	⌗ Copy	⊖ Delete	2	2	Submit it by today
☐	🖊 Edit	⌗ Copy	⊖ Delete	3	5	submit it by next monday

Submit Assignment

```
Output

  virtual_classroom (run)  ×      virtual_classroom (run) #2  ×

  run:
  Enter command:
  add_classroom English
  Classroom English has been created.
  Enter command:
  add_student 4 English
  Student 4 has been enrolled in English.
  Enter command:
  schedule_assignment English submit it by next monday
  Assignment for English has been scheduled.
  Enter command:
  submit_assignment 4 English assignment as submitted
  Assignment submitted by Student 4 in English.
  Enter command:
```

Assignment submitted Record is stored in database

Extra options

	id	student_id	classroom_id	assignment_details
☐ Edit Copy Delete	3	3	1	assignment as submitted
☐ Edit Copy Delete	4	3	2	assignment as submitted
☐ Edit Copy Delete	5	4	5	assignment as submitted