

Comprehensive Python course for AI

Exercises 28 && 29

Deadline: 2024 01 Febuary
Score: 700

2023 25 January

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Exercises 28

Score: 400

- ❖ **Develop a OOP Python programm** for managing a MongoDB database of student records. The programm should encompass functionalities for adding, removing, searching, and displaying student details. A critical aspect of this project is to implement a dynamic edit feature that allows modification of any student attribute in a student record.
- ❖ **Add Student Records:** Include functionality to add new student records with both required (student_id, name, age) and optional attributes.
- ❖ **Remove Student Records:** Implement the ability to remove a student record using the student_id.

MongoDB

- ❖ **Search for Student Records:** Develop a function to find and retrieve details of a student using their `student_id`.
- ❖ **Display Student Details:** Create a feature to show details of all student records.
- ❖ **Edit**
 - The edit feature should allow users to:
 - Select a student record by entering the `student_id`.
 - View and be prompted to edit each attribute of the record.
 - Submit changes by entering new values or leave attributes unchanged by entering blank.
 - Ensure that the updated record, with any changes, is saved back to the database.

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Exercises 29

Score: 300

- ❖ Create a 2D NumPy array with dimensions 5x5, filled with integers from 1 to 25.
- ❖ Use slicing to:
 - ✓ Extract and display the third row of the array.
 - ✓ Extract and display the second column of the array.

- ❖ Create a 2D NumPy array with dimensions 3x4, filled with any integers of your choice. Access and print the element at the second row and third column.

- ❖ **Create two NumPy arrays of the same size with random integers. Calculate their element-wise sum and then display elements from new arrays wherever the sum is greater than 50.**

Thanks

Good Luck!

Don't give up on your dreams 😊