OLI Assignment 12 Due Sunday 12/6 by 9:00pm

As you read the following OLI pages and complete the interactive activities, capture the screenshots of the completed activities and replace the respective screenshots in the document.

- Page 48 Array as a struct member

When you are ready to submit the assignment, download the document in PDF and submit the PDF file on Cougar Course as the proof for your work.

Page 48 Array as a struct member

MR potential applications

Think about an application that could benefit from having a struct data type that includes an array data member. In the following space, define the struct data type and its data members using descriptive names.

```
struct Test_Grades{
        string student
        int num_of_tests
        string question_answers[10]
        int num_of_questions
};
```

Resubmit

✔ Thanks for sharing.

Hotspot collect southern_ca

Let's trace through some steps of the above nested loop

Which of the following would be carried out first?

- i_city++;
- (selected) i_city = 0
- i_city < num_cities
- i_hour = 0

✔ Correct; the initialization of the outer loop will be carried out first.

Since `i_city < num_cities` evaluates to `true`, the outer loop body will be executed next. Where would "Los Angeles" be stored?

- (selected) southern_ca[0].city
- southern_ca.city
- southern_ca[1].city

✔ Correct, i_city is 0.

Where would "California" be stored?

- southern_ca.state
- (selected) southern_ca[0].state
- southern_ca[1].state

✔ Correct, i_city is 0.

After the two getline statements, which of the following would be carried out next?

- i_city++;
- (selected) i_hour = 0
- i_hour < 24
- i_hour++

✔ Correct; the initialization of the inner loop will be carried out next.

Since `i_hour < 24` evaluates to `true`, the inner loop body will be executed next. Where would the first temperature for Los Angeles, i.e. 53, be stored?

- southern_ca[1].hourly_temps[0]
- southern_ca[0].hourly_temps[1]
- (selected) southern_ca[0].hourly_temps[0]

✔ Correct, i_city is 0 and i_hour is 0.

After collecting and storing 52, which of the following would be carried out next?

- i_city++;
- (selected) i_hour++
- i_hour < 24
- input >> sountern_ca[i_city].hourly_temps[i_hour]

✔ Correct; the index update is carried out after collecting one temperature.

```
input >> southern_ca[i_city].hourly_temps[i_hour];
```

The inner loop has been set up to repeat the above statements 24 times, each with a different i_hour value. Where would the last temperature for Los Angeles, i.e. 57, be stored?

- southern_ca[23].hourly_temps[23]
- (selected) southern_ca[0].hourly_temps[23]
- southern_ca[23].hourly_temps[0]
- southern_ca[0].hourly_temps[24]

✔ Correct, i_city remains 0 for the duration of the inner loop. The value of i_hour is 23 when the inner loop body is last executed.

Click on this link to access a program containing the above code segment as well as some functions that work with the data collected.

What questions and/or tips for others do you have regarding the use of nested loop to handle array of struct objects that include array data members.

None.

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✔ Thanks for sharing.