Quiz and Final Project

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You are now nearly at the end of the SPD XSeries. Sadly for us, this is the last unit in the course. In this unit you will complete a short design quiz on this module, as well as a longer design project that draws material for the entire course. The project is somewhat open ended. You will do and answer questions about a simple version. You can make a more complex version afterwards on your own.

We'd like to thank you for spending all this time with our SPD XSeries courses. We hope that you've had fun and learned a few things along the way. As you know, these courses are free, and we want them to stay that way. But many people ask how they can help support the courses, and so we'd like to suggest a few options. Again, this is entirely optional, please consider the following only if you feel it is appropriate for you.

- Because these courses focus on a general design method rather than teaching a popular language, they don't get quite as much 'free press' as an Introduction to Python course does. So please recommend the course to people who might find it interesting. One good way to do that is by writing reviews at Coursetalk - the review pages for these courses are: SPD1, SPD2, and SPD3.
- If you have signed up for a verified certificate for all three courses, then you will be able to receive a verified certificate for the entire XSeries. You can display the certificate on your LinkedIn page, and use it to demonstrate to colleges, employers, and colleagues that you successfully completed a challenging edX course. The revenue from verified certificates goes to help operate edx.org itself, as well as funding the ongoing development of the SPD course series. If you are interested, please register to earn a Verified Certificate.

Gregor, Erika and the rest of the SPD Course Team

Welcome to the final quiz of SPD!

For this multiple choice design quiz, download the starter and complete the two problems. The first deals with this week's material, graphs, and the second is a search project involving content from many parts of the course.

Once you have finished, answer the multiple choice questions about your design.

Unlike the lecture questions, you will only have one attempt to answer each question in the quiz, so make sure to read each answer carefully before selecting one and pressing submit.

Question 1

1/1 point (graded)

The first 2 questions deal with PROBLEM 1 in the starter file.

What fields are necessary in your Data Definition for user? Possibilities are listed below with the selector name, and the type.

- [x] user-name: String
- [ ] user-name: User
- [ ] user-profile: String
- [x] user-verified: Boolen
- [ ] user-verified: (listof User)
- [ ] user-following: (listof String)
- [x] user-following: (listof User)
- [ ] user-following: User

✔

Explanation
Each user has a name, a Boolean that is true if they are a verified user, and a list of users they follow.

Submit Show Answer

Answers are displayed within the problem

Question 2

1/1 point (graded)

Do you need at least one rsf accumulator as well as visited and todo to complete the design of `most-followers`?

- [x] yes
- [ ] no

Explanation
You need to keep track of how many followers each user has. This information is not contained in visited, so we need an extra rsf accumulator.

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Answers are displayed within the problem

The next 3 questions deal with PROBLEM 2 from the starter file.

Suppose you have 9 TAs, as shown in the table below, who are available to work 1 or 2 of 12 possible shifts.

Name	# of Shifts	Availability
Erika	1	1, 3, 7, 9
Ryan	1	1, 8, 10
Reece	1	5, 6
Gordon	2	2, 3, 9
David	2	2, 8, 9
Katie	1	4, 6
Aashish	2	1, 10
Grant	2	1, 11
Raeanne	2	1, 11, 12

Question 3

1/1 point (graded)

Can you fill all 12 slots with the TAs above?

- [ ] yes
- [x] no

Explanation
There is no possible schedule that fills every shift with the TAs above.

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Answers are displayed within the problem

Question 4

1/1 point (graded)

Suppose you add a 10th TA, Alex who is only available to work shift 7.

Can you fill every shift to make a schdule using the 9 TAs above plus Alex?

- [ ] yes
- [x] no

Explanation
There is still no way to make a schedule to fill every shift.

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Answers are displayed within the problem

Question 5

1/1 point (graded)

Suppose instead of Alex, you add a 10th TA, Erin who is only available to work shift 4.

Can you fill every shift to make a schdule using the 9 TAs above plus Erin?

- [x] yes
- [ ] no

Explanation
Yes! There is at least one schedule with the 10 TAs that fills all shifts.

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Answers are displayed within the problem

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