

1. What is the waterfall model for software development?

2. What is a class (in the context of object-orientation)?

3. What is a design pattern? (Indicate level of familiarity from 0-10, with 10 being extremely proficient and 0 being no knowledge.) If applicable, please briefly describe your experience.

4. What is an object-oriented framework? (Indicate level of familiarity from 0-10, with 10 being extremely proficient and 0 being no knowledge.) If applicable, please briefly describe your experience.

5. Have you written reusable code? Explain (Who used it? Was it modified?)

6. Have you used reusable code? Explain (Who wrote it? Did you have to modify it?)

7. What is testing? How do you know when you have a successful test? (Indicate level of familiarity from 0-10, with 10 being extremely proficient and 0 being no knowledge.) If applicable, please briefly describe your experience.

8. Are you familiar with C++ (what is the largest or most complicated program you have ever developed with C++)?

9. Are you familiar with Java (what is the largest or most complicated program you have ever developed with Java)?

10. Using an object-oriented modeling language (e.g., OMT, UML, etc.) Draw a class diagram for a student enrollment system that reflects the following specification.

A student Enrollment System (SES) comprises courses and people. Each course has a name, number of credits, and capacity. A student may enroll in the course, drop the course, or audit the course. There are two main groups of people involved in the SES: students and professors. There are two types of students, undergraduate and graduate students. A professor may teach one or more classes. A student may be involved with zero or more classes, where involvement refers to enrolling, dropping, or auditing.

11. Draw a simple state diagram that describes how a student would use the SES to enroll, drop, or audit a course. Be sure to show traceability back to the above class diagram.