1

1. Software architecture is often compared to the architecture of buildings as a conceptual analogy. What are the strong points of that analogy? What are the weaknesses of the analogy?
2. No matter the source, all requirements encompass the 3 categories. Name these categories and give an explanation to each of them and how an architecture responds to them.
3. What is virtual environment? What are the benefits of using virtual environments? How do you create virtual environment and activate it (write a command)?

2

1. Chapter 3 describes 7 activities required to be done in creating software architecture, using that architecture to realize a complete design, and then implementing or managing the evolution of a target system or application. Describe these activities.
2. Recover-from-faults tactics are refined into preparation-and-repair tactics and reintroduction tactics. Explain each tactic and give examples.
3. What are templates? Explain how you render templates, what are Variables Control Structures in Jinja2?

3

1. Suppose you want to introduce architecture-centric practices to your organization. Your management is open to the idea, but wants to know the ROI for doing so. How would you respond?
2. Write a concrete availability scenario for the software for an (hypothetical) online hotel and room reservation.
3. While working with databases, what is the Model? What are the most common SQLAlchemy column options?

4

1. How does availability trade off against modifiability? How would you make a change to a system that is required to have "24/7'' availability (no scheduled or unscheduled downtime, ever)?
2. If you are a technology producer, what are the advantages and disadvantages of adhering to interoperability standards? Why would a producer not adhere to a standard?
3. What is the Web Form? Explain Cross-Site Request Forgery (CSRF) and protection against them.