## Software Engineering Process Models

* Describe the following software process models, including advantages and disadvantages.
  + Waterfall model
  + Spiral model (know the four sectors in Boehm's spiral model)
  + RUP
* Agile methods: what are the key features, why was it developed and what is its purpose?
* What are some of the advantages of SaaS over traditional SWS?
* Describe software quality
* Differentiate validation from verification

## SaaS Architecture

* Discuss the difference between client server architecture and peer-to-peer architecture.
* What is included in an HTTP request and what is included in an HTTP response?
* Describe 3-tier architecture. Give examples of the software used in each tier.
* How can we scale the persistence tier?
* Discuss the MVC design pattern and its related elements in a Rails application.
* Identify a ReSTful route given an action and an action given a route.

## Version Control

* Why does teamwork increase the complexity of version control?
* What is the major difference between distributed version control systems different and centralized version control systems?

## Regular Expressions

* Write a simple regular expression to match a certain string of text

## Rails

* Describe Rail’s two guiding principles – DRY and Convention over Configuration
* What command is used to create a new rails application?
* Know the file name and location for each of the following: Model, Views (show, new, edit) and Controller

## Behavior Driven Development

* What is velocity and how is it used measure productivity?
* Given a scenario, write a SMART user story.
* What cucumber and capybara used for.

## P&D Requirements

* Why requirements engineering is important?
* Differentiate between functional and non-functional requirements. Given a scenario identify several of each.
* Given a scenario, be able to draw a use case diagram.