Fundamentals of Software Engineering

This Tutorial is based on questions from the book Software Engineering 10 by Ian Sommerville and is based on the material covered in chapter 1.

Week 1 Tutorial

1

What is the most important difference between generic software product development and custom software development? What might this mean in practice for users of generic software products?

Give some examples of generic software products that you have used?

Give some examples of custom software products that you have used?

In terms of jobs roles what type of software product do you think you will end up developing?

2

What are the four important attributes that all professional software should have? Suggest four other attributes that may sometimes be significant.

3

Apart from the challenges of heterogeneity, business and social change and trust and security, identify other problems and challenges that software engineering is likely to face in the 21st century (hint: think about the environment).

4

Based on your own knowledge of some of the application types discussed in section 1.1.2 of Software Engineering 10 explain, with examples, why different application types require specialized software engineering techniques to support their design and development.

5

Discuss whether professional engineers should be certified in the same way as doctors or lawyers.