Software Engineering Comprehensive Exam

Fall 2000

Answer each of the four questions below in the space provided. Do not use or attach additional sheets, they will not be graded.

1. You have been asked to settle an argument between two software engineers concerning the right time to construct a GUI. Engineer A thinks the GUI should be constructed *during* the Discovery/Requirements Analysis phase. Engineer B thinks the GUI should not be constructed until the Discovery/Requirements Analysis phase *is complete*. Which engineering is correct? Explain your reasoning.

2. What is the most important phase of the software engineering process? Justify your answer.

3. What are the basic steps a software engineer takes to writing a program? Explain the activity involved in each of the steps.

4. Write a program that accepts an alphanumeric string as input and produces the reverse of the string as output. Thus, the string (not including the quotation marks) “I hate exams” would be rendered as “smaxe etah I”. Remember to apply the engineering process to writing this program.