CMSC435; Section 0101

Mar. 2, 2006; Quiz #4

Student's Name: _____

Question 1: Our single-machine software testing tool called GUITAR consists of several sub-systems. Each sub-system produces, consumes, or modifies a test artifact. Examples of sub-systems include (1) test case generator, (2) reverse engineering tool, (3) model editor, (4) capture/replay tool that generates test cases and expected output, (5) model-based expected output generator, (6) test adequacy evaluator, and (7) test case executor. Examples of test artifacts include (a) test cases, (b) expected output, (c) GUI model, and (d) test adequacy report.

GUITAR has evolved from a single-developer software to a multi-developer software. We cannot currently predict the number of developers, sub-systems, and models that will be added to GUITAR over the next 10 years.

Suggest a software architecture for GUITAR. Justify your answer in detail.