CI6203 Assignment 3

Group Members:

No.

Name (as printed on your matriculated card)

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Instructions:

• Answer all questions.

• Do not perform any format change (font, font size, etc.) to the MS Word document.

• Answer each question in the space provided; do not add extra pages.

• Submit a printed copy of this document by the due date.

Q1

You are a software engineering manager and your team proposes that model-driven engineering should be used to develop a new system. What factors should you take into account when deciding whether or not to introduce this new approach to software development?

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Q2

How might you use a model of a system that already exists? Explain why it is not always necessary for such a system model to be complete and correct. Would the same be true if you were developing a model of a new system?

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Q3

Develop a sequence diagram showing the interactions involved when a student registers for a course in a university. Courses may have limited enrolment, so the registration process must include checks that places are available. Assume that the student accesses an electronic course catalog to find out about available courses.

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Q4

Look carefully at how messages and mailboxes are represented in the email system that you use. Model the object classes that might be used in the system implementation to represent a mailbox and an e-mail message.

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Q5

Based on your experience with a bank ATM, draw an activity diagram that models the data processing involved when a customer withdraws cash from the machine.

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Q6

With reference to the MDA case study posted above concerning the Statewide Automated Child Welfare Information System (SACWIS) project undertaken by the State of Ohio, identify and elaborate five points in the case study where model-driven architecture (MDA) has shown to be favorably adopted in the project development process.

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