Carleton University Department of Systems and Computer Engineering Software Requirements Engineering

Winter 2015

Laboratory 8

Instructions

- This is an individual work.
- To receive credit you have to both show you solution to the TA and submit your work to cuLearn.
- For those who don't finish early, the TA will ask you to show whatever you have completed, starting at about 15 minutes before the end of the lab period.

Problem Summary

Recall the ATM problem description you worked on Lab-5. You did the initial stage of the Analysis phase and you have the results of the requirement elicitation. In particular, you have a Use Case Diagram with description and an initial Class Diagram with only entity classes. In this work you need to update that Class Diagram and write down your heuristics.

In the next pages, the Use Case Diagram (for your reference only, you don't need to do anything on it for today's lab) and the Class Diagram (which you need to modify) of the ATM problem is given. For the description of these diagrams, please refer to Lab-5.

Problem Description

When you created the initial class diagram in Lab-5, you did not use any class taxonomy, neither did you mention any heuristic. In this lab, you need to update that diagram by identifying the class taxonomy (i.e., *Entity*, *Boundary* and *Control* classes), and their attributes and operations by using the heuristics taught in class. (See slides of OOAnalysis, especially slide#12 and slide#129 onwards).

You are asked to revise the class diagram below. Feel free to add, remove and change any part of the class diagram. You need to justify your modifications by recording why and which heuristic you use.

Your answer should include:

- 1. An updated class diagram (with proper class taxonomy, attributes and operations)
- 2. Justifications for the updates made in the diagram

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ANSWER TO PREVIOUS LABS Use case diagram Withdraw «include» Bank CashDispenser «initiate» «include» CheckBalance «include» RecieptPrinter «initiate» «include» Transfer CardInserted «initiate» «initiate» «extend» Customer «include include» Query «extend» TakePicture CardReader «initiate» CancelTransaction «include» «extend» «èxtend» «extend» PinInvalid InsertPin «extend» Deposit Camera Lost/StolenCard CollectEnvelope DepositBox RefreshATM ATM Operator

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