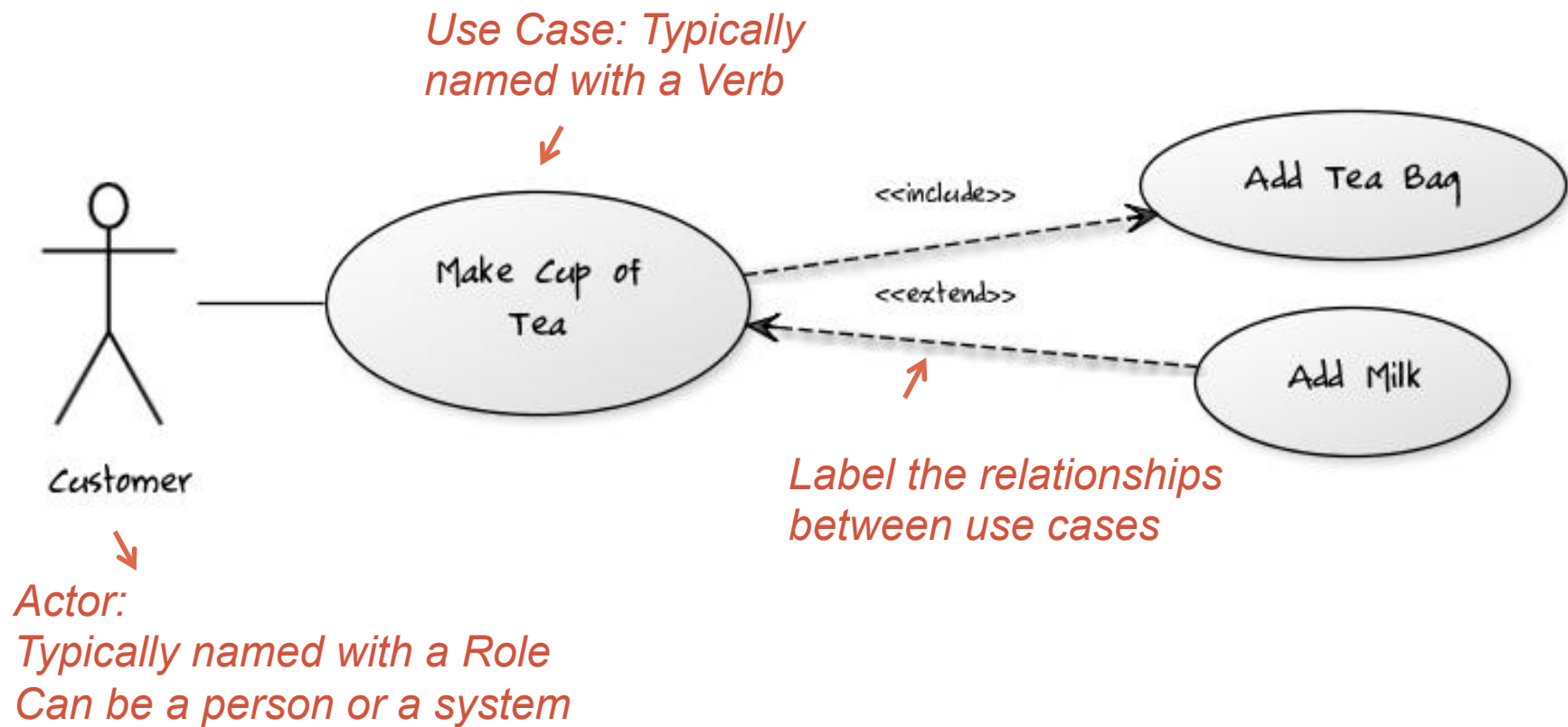




SOFTWARE ENGINEERING: USE CASES: IN-CLASS EXERCISE

Professors M. Brian Blake and Iman Saleh

Example



UML Diagrams: Tools

- Eclipse UML tools:
 - <http://wiki.eclipse.org/MDT-UML2Tools>
 - <http://www.eclipse.org/at/>
- yUML: <http://yuml.me/> → DEMO
- ArgoUML: <http://argouml.tigris.org/> → DEMO

Problem Statement: *EasyBank*

- The EasyBank Online Banking System is created for the EasyBank, which is a small bank for personal and small-business banking. The banking system enables EasyBank customers to access their bank accounts and perform everyday banking transactions over the Internet. The EasyBank has many customers. Each customer has one or more EasyBank accounts.
- The city in which the EasyBank exists uses the dollar as currency. The smallest unit of the currency is the single dollar. There are no cents and all transactions resolve evenly.
- When customers open a new account with the EasyBank, they receive an information pack that contains unique name and password information to log in to the EasyBank Internet banking system. Customers can use EasyBank to update their profile. However, to change their passwords or update their contact information, customers need to contact the bank and an administrator can use EasyBank to perform any of these two operations.
- Because the EasyBank Internet banking system uses a Web interface, customers can connect to it from home, or anywhere else, with an Internet browser. With this system, customers can perform banking operations online, such as displaying the balance of an account, viewing transactions history or transferring money. The customers can also interact with the EasyBank tellers to perform the same operations.
- The EasyBank has requested a complete online banking system to enable customers to bank over the Internet and to automate existing teller operations. The system must be robust enough to meet the demands of the EasyBank customers, and scalable enough to grow as the number of EasyBank customers increases. Customers must be able to access the online banking system by using any secure browser. The system must be platform-independent, because the EasyBank branch uses many different types of computer.

Problem Statement: *Reviews-R-Us*

- It is a common occurrence that on-line shoppers look for reviews on products before they make their purchase. Depending on the quality of their query on various search engines such as Google and Yahoo, they get any range of reviews. Reviews can be old or out-dated, since reviews tend to change over-time. Users do not always formulate their search appropriately such that they also get the competing products. As such, the Reviews-R-Us (RRU) system alleviates those concerns. This system will maintain a repository of reviews based on a list of products that are commonly researched over the Internet. RRU will contain an internal database that stores and manages reviews of many products. Users will be able to connect to the RRU web portal and submit queries based on a specified product name or be able to browse through categories of products provided by RRU. The RRU system is split into 3 major components, a *web user interface module*, a *review discovery module*, a *data management module*.
- The web user interface module will allow a user to log into the system. This interface will show the user a list of his/her past queries. The user should either be able to enter product name into the system or have the ability to browse through a list of categories and pick a specific product. The web user interface would present information about products from the data management module.
- The data management module is an interface to the RRU's internal relational database. The internal database should have objects that represent individual users, products, and reviews. The user objects should be connected to the reviews that he/she visited in the past. The data management module should allow the review discovery module or a human administrator to add, delete, or modify reviews. Reviews should be detailed by the date that the review was created by the reviewer, the date that the system captured the review, the text of the review, and overall rating of the review (i.e. Excellent, Very Good, Average, Bad, and Very Bad). The products should be connected to their reviews.
- The review discovery module is a process within the RRU that runs on the server for which the RRU is present. This process uses continual queries via Google's search engine to capture reviews. The review discovery will be seeded by user requests for products. In addition, the system will use reviews that reside on the same page as the discovered reviews to search for reviews on other products. The system will use an external sophisticated mechanism for extracting review text and the date of the review from an HTML page.
- The RRU will respond to a users request within 15 seconds of pressing the submit button. In addition, the review discovery system must be able to remove reviews after a certain time period as prescribed by the administrator.



Any Questions?

iman@miami.edu