This scenario describes Pat’s checkbook problem for which we will model a “checkbook assistant” with some activity dates!

Pat’s Checkbook Narrative

An everyday citizen, Pat, tries to keep track of his/her financial accounts with check register and written notes, but feels that a "personal financial assistant" would be very useful.

Pat maintains a checking and savings account. Pat writes checks and records them in the check register. Pat transfers money back and forth between the checking and savings accounts.

At the end of the month when the bank statement arrives Pat tries to double check it by cross checking the bank statement with the checkbook’s check register.

Pat tries to keep track of expenses by summarizing those expenses at the end of the month into groups for things like food, rent, car payments, entertainment, etc.

At the end of the year Pat's tax return usually requires itemized deductions and the checkbook is the primary source for that information.

Object Modeling Pat’s Checkbook - Phase 1

Draft: Email pdf due: 9 am – Feb 18, 2019

Given the narrative above your team should be able to identify primary issues in Pat’s checkbook process that would be modeled effectively with classes in a class diagram. The narrative is purposefully limited in detail. You’re a business major! Use your “domain knowledge” to consider what functions Pat’s checkbook assistant will have to support. Phase 1 lays out the basic problem concepts in classes. Phase 2 will require modeling 2 (or 3) specific checkbook tasks. Use Cases may be a good starting point to identify what Pat does and then what the “system” does in response.

Once you’ve identified all the core classes that explain the business rules in this problem you will draft a useful class diagram with the appropriate attributes and services that Pat’s checkbook needs to accomplish his/her goals as described in Phase 2.

For Phase 1 complete a UML-2 class diagram with descriptions of each class, attribute, service and relationship following the UML-2 Guidelines.

Phase 1 complete and on time is worth 2 pts.

Diagrams must be “computer drawn” (e.g. Visio™, SmartDraw™, PowerPoint etc.) Descriptions should be word processed.
You will receive written feedback at class in the week of 3 Oct to help your work on Phase 2.

Final Phase 2 Email single pdf due: 9 am, Mar 4, 2019: Finally, once you think you’ve got the classes and their relationships and responsibilities down “pat,” it’s time to model the sequence of class & object interactions that occur to satisfy the Use Cases that you modeled for Pat’s checkbook problem. In the end you should attend to three important functions of Pat’s checkbook: 1) issuing a payment, 2) reconciling the checkbook with the bank’s accounts, and 3) preparing an IRS 1040 tax return using the information collected and organized in Pat’s checkbook assistant.

For Phase 2 complete a revised UML-2 class diagram with descriptions of each class, attribute, service and relationship following the UML-2 Guidelines.

Submit UML-2 use cases and sequence diagrams for two scenarios: A; “Pat issues a payment for an expense” and B: “Pat reconciles his/her checkbook with the bank’s records.”

“Challenge!”: Include UML-2 use case and sequence diagram for “Pat prepares his/her annual IRS 1040 tax return.”

Phase 2 complete and on time is worth 3 pts.

This is how object modeling is down in an iterative, circular and elaborative process. You may need to pass your drafts/sketches by Dr. Waguespack for guidance.

Don’t be afraid to sketch ideas and then bring them by Dr. Waguespack to discuss the model’s “usefulness.” It’s much easier to refine a weak model than draft a very good one from scratch. Refine, refine, refine!!!!