Homework: Modeling Exercises.

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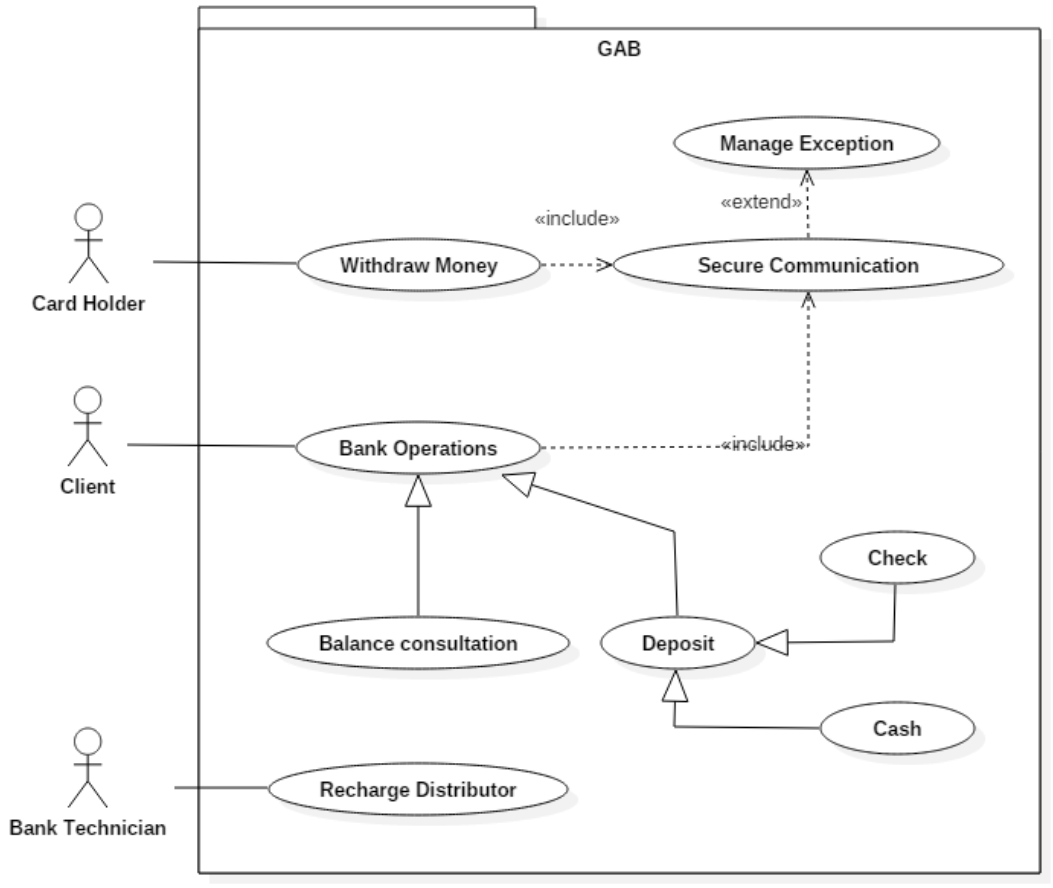
During this homework which consist of making some models to some system using unified modeling languages (UML), we use StarUML[1] for doing so.

Exercise 1:

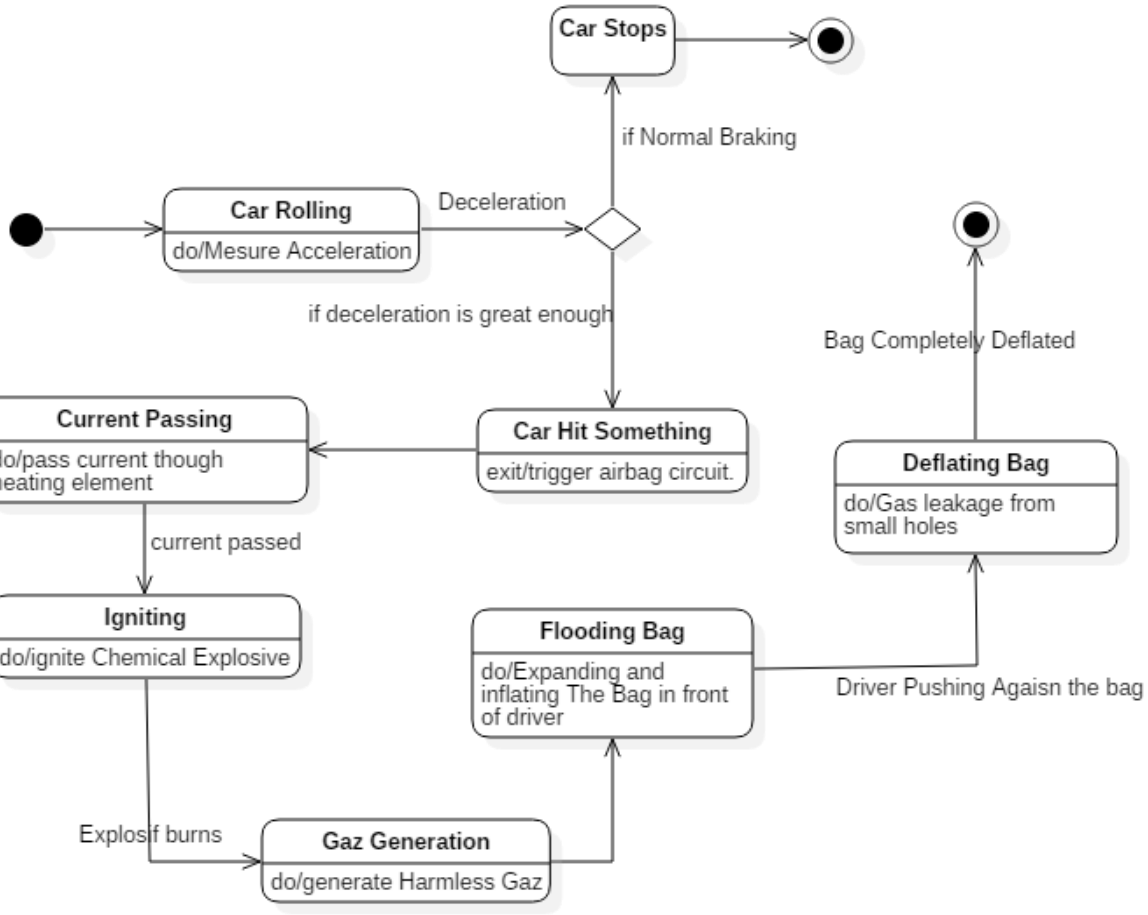
In this Exercise the purpose was to make a Use Case Diagram that describe how the bank machine works. Here is what we did:



[1] http://staruml.io/

Exercise 2:

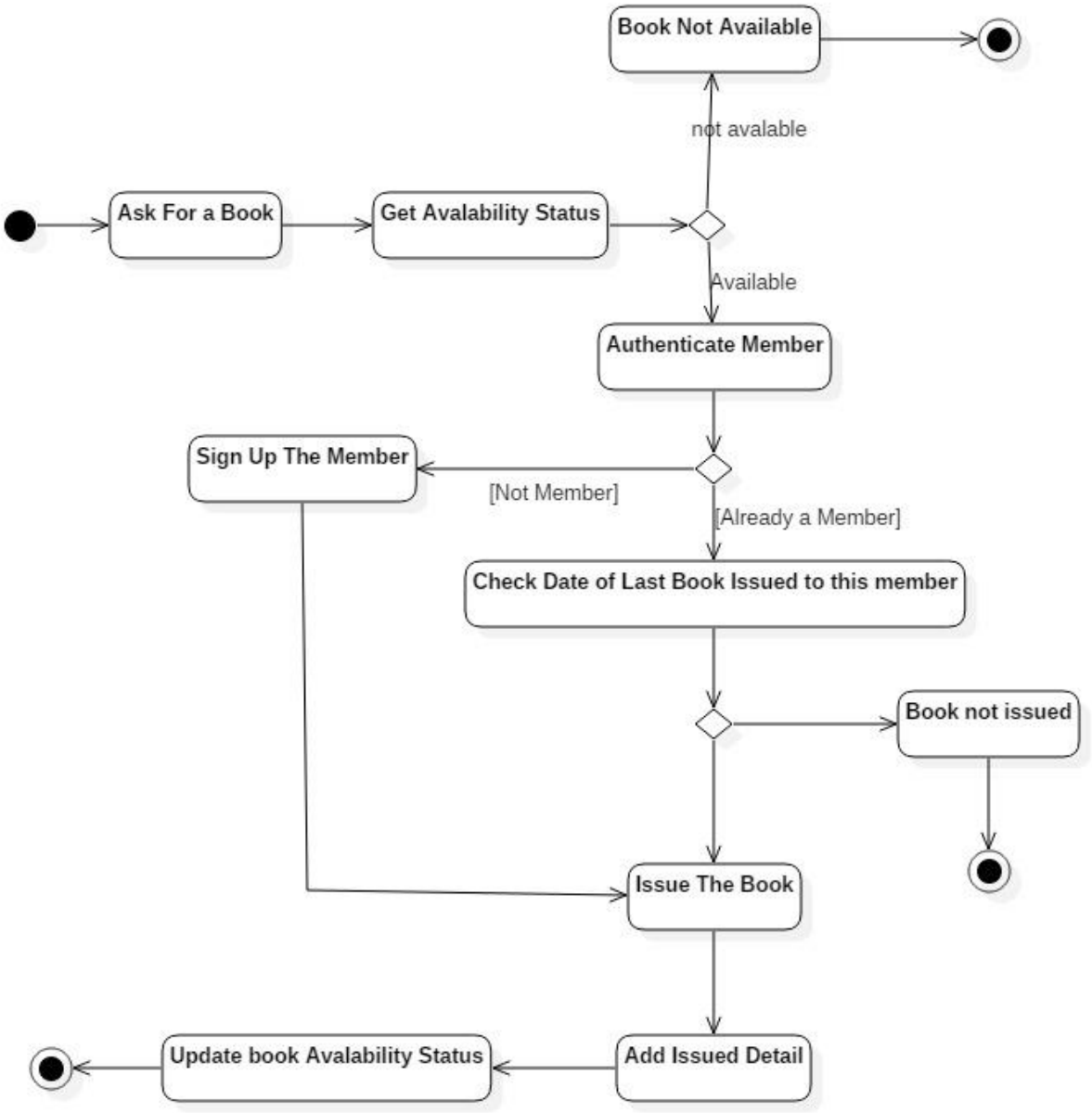
In this exercise we've been asked to give an example of a real time system and make a behavior modeling with an Event Driven Modeling paradigm, the example which comes to our mind is the airbag system, which is both real time system (The System must trigger the airbag in case of hitting something immediately) and Safety-critical systems at the same time (A system whose failure may result in injury, loss of life or serious environmental damage) , the way the airbag system work is provided by this website [2]. We use a State-chart Diagram for modeling this case, here is what we did:



[2] https://www.explainthatstuff.com/airbags.html

Exercise 3:

For this final exercise we've been asked to give an example of a business system and make a behavior modeling with a Data Driven Modeling paradigm, we think about a library management system that subscribe client, take and borrow books. What we did is an activity diagram that show the different behaviors in the case of taking a book. Here is what we did:



Conclusion: As a conclusion of the homework we see that the system modeling from the different perspectives is the core tasks of software engineering.