

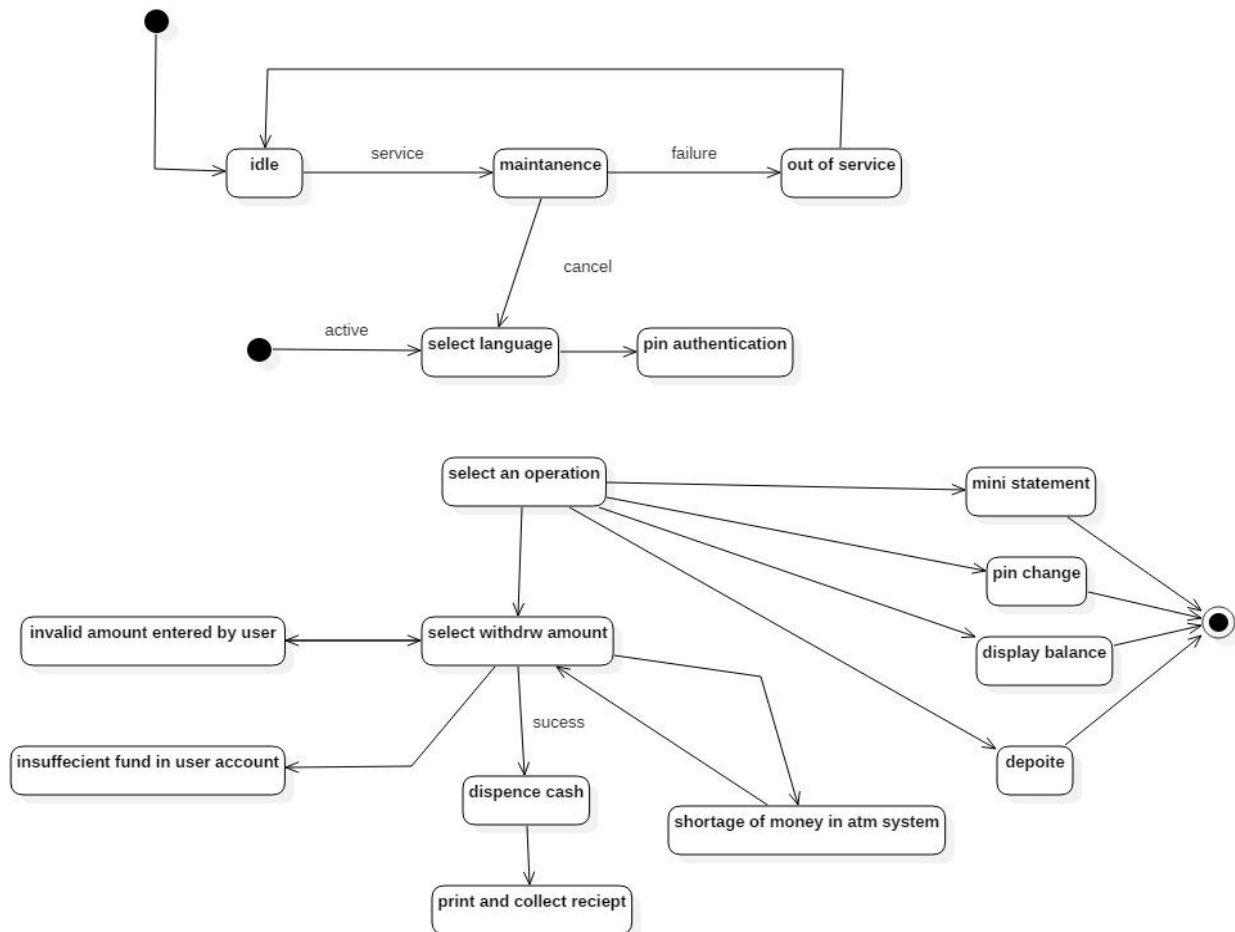
# SEC302 - Object Oriented Software Engineering

## FINAL EXAM

### Question #1 (16 Marks)

An ATM machine can be used for Money Withdrawal and getting Mini Account statement. Make a State Machine Diagram for these two cases.

Ans



## Question #2 (10 Marks)

You have to make a personalized software for a consultancy firm. Some components of the software are those for which you already have code. Some parts of the software are such that you can find ready-to-be-used code from internet. If you want to embed both types of code into your product, and complete the software by coding the remaining part, what can you expect during this whole process? Will it be easy or hard? What problems you might face and how will you overcome those problems?

Ans: I think combining my code with able to use code from the web are going to be easy but able to use code might not be precisely the same what my system demands or if in-future there's some error in this able to use code then it'd be hard to mend because fixing the opposite person's code is actually a troublesome job. It's demanding to know other person's code.

Secondly ready-to-use codes don't seem to be always free. you'll should pay money for the code you would like.

When embedding two or quite two codes there are high chances of evolving bugs and errors.

## Question #3 (24 Marks)

1. What is the difference between a Task and a Work Product? Explain in your own words and give an example of each.

Ans : **Task:**

Smallest unit of work subject to management Small enough for adequate planning and tracking

- Large enough to avoid micro-management smallest unit of management  
Accountability
- Atomic unit of planning and tracking
- Tasks have finite duration, need resources, produce tangible result  
(Documents, code, models)
- Specification of a task: Work package
- Name, description of work to be done
- Preconditions for starting, duration, required resources
- Work product to be produced, acceptance criteria for it
- Risk involved

**work product:**

A work product may begin as an analysis made during the development of a project, creating a type of proposal for the project that a company cannot deliver until the project has received approval.

Companies use work products to provide information to current stakeholders and potential investors.

Types of information available in a work product might include prototypes, presentations, recorded discussions, diagrams and status reports.

2. You are working on coding of a software in which a lot of calculations are involved. The calculations are quite easy to be done, but you do expect some inconsistency in the calculations because of some inner problem with the software. Would you rather go for Fault Avoidance technique or Fault Detection technique in the Testing Phase? Explain your answer.

Ans: Fault detection techniques, such as debugging and testing, are uncontrolled and controlled experiments, respectively, used during the development process to identify erroneous states and find the underlying faults before releasing the system. Fault detection techniques assist in finding faults in systems, but do not try to recover from the failures caused by them. In general, fault detection techniques are applied during development, but in some cases they are also used after the release of the system. The black boxes in an airplane to log the last few minutes of a flight is an example of a fault detection technique.

3. There are different types of testing. State which techniques are performed by the developer and which of them are performed by the client.

Ans: Performance testing checks the nonfunctional requirements and additional design goals from the SDD. Functional and performance testing are done by developers.

Acceptance testing and installation testing check the system against the project agreement and is done by the client, if necessary, with help by the developers.