



暨南大學
JINAN UNIVERSITY

Software Engineering Project

1. Project should be defended on November 1st or November 2nd 2019,
2. Each Group should have between 4 and 5 students,
3. Each Group should give a printed colored document + CD + prepare oral defense in ppt (including simulation),
4. Two groups that have similar answers will not be appreciated,
5. Students should start reading about UML,
6. Students are encouraged to have ideas from similar examples in internet.

Presentation:

An ATM is an electronic device designed for automated dispensing of money. A user can withdraw money quickly and easily after authorization. The user interacts with the system through a card reader and a numerical keypad. A small display screen allows messages and information to be displayed to the user. Bank members can access special functions such as ordering a statement.

The ATM is required

1. To allow authorized card holders to make transactions:
 - a. Card holders shall view and/or print account balances,
 - b. Card holder shall make cash withdrawals,
 - c. Card holder shall make cash or check deposits,
 - d. Card holder shall quit session,
2. To allow bank members to access additional, special services:
 - a. A bank member shall be able to order a statement,
 - b. A bank member shall be able to change security details (e.g. PIN number),
3. To allow access to authorized bank staff:
 - a. Authorized staff can gain access to re-stock the machine,
 - b. Authorized staff are able to carry out routine servicing and maintenance,
 - c. To keep track of how much money it contains and alert bank staff when stocks are getting low.

Additional Notes: Users shall be able to access the ATM by punching in their account number and PIN. Once the system has verified that the account is active and the PIN matches with the account number, the system offers the users four choices. Users can withdraw money, deposit money, check

balance or quit the session. The user must have a minimum of 100 RMB in his / her account. At the end of any transaction, a printed copy of the transaction is provided to the user. A transaction could be - withdraw money, deposit money or check balance. Once the user has completed a transaction, the system offers the user the same four choices, until the user decides to quit.

The system shall interface with the device to dispense cash, the device to accept cash or check and the printer. Since we have not studied databases in this course, the system will keep all the information in two RandomAccess files. One file will hold the passwords and the other account balances.

Part I: UML-based Design:

1. Add more services to give a different answer compared with other groups. Any group will be well-appreciated, i.e., will get more and more marks, if it enrich the project by proposing more and more services than other groups,
2. Draw a Use-case diagram related to this ATM application,
3. Draw a Statechart diagram,
4. Draw Class diagram,
5. Draw Sequence diagram,
6. Draw Component diagram,
7. Draw Deployment diagram.

Part II: Implementation:

1. Develop this ATM application by using an OO programming language (Java, C++, ..etc),
2. Each group should have its own user interfaces (different from other groups),
3. Run simulation and put screenshot in the required document.

Part III: Oral Defense

1. Each group prepares a PPT presentation in 10 slides at most with simulation,
2. Each member of the group must present a part of the work (in English).