Software Architecture Checklist

CPS406_S1_GROUP9_W16

Project Chosen : Innovative Automated Teller Machine (ATM)

Programming Language : Java

Team member roles:

Francis, Matthew - Team Leader

Oh, Sung Won - Developer

Kim, Jooha - Client

Pacheco, Michael Alexander - Developer

Samuels, Marcel-Pierre Douglas - Requirements Engineer

Tuca, Ciprian - Tester

Question 1

The architectural style for our software is Object-oriented because this style makes it easy to show how each object cooperates with one another. It is also a scheme to make it loosely coupled and highly cohesive. Object-oriented styling is desirable in many real-life situations for its understandability, reusability, and extensibility, making it more the reason why we used it as our architectural style.

Question 2

The components and subcomponents of our software is organized in the table below:

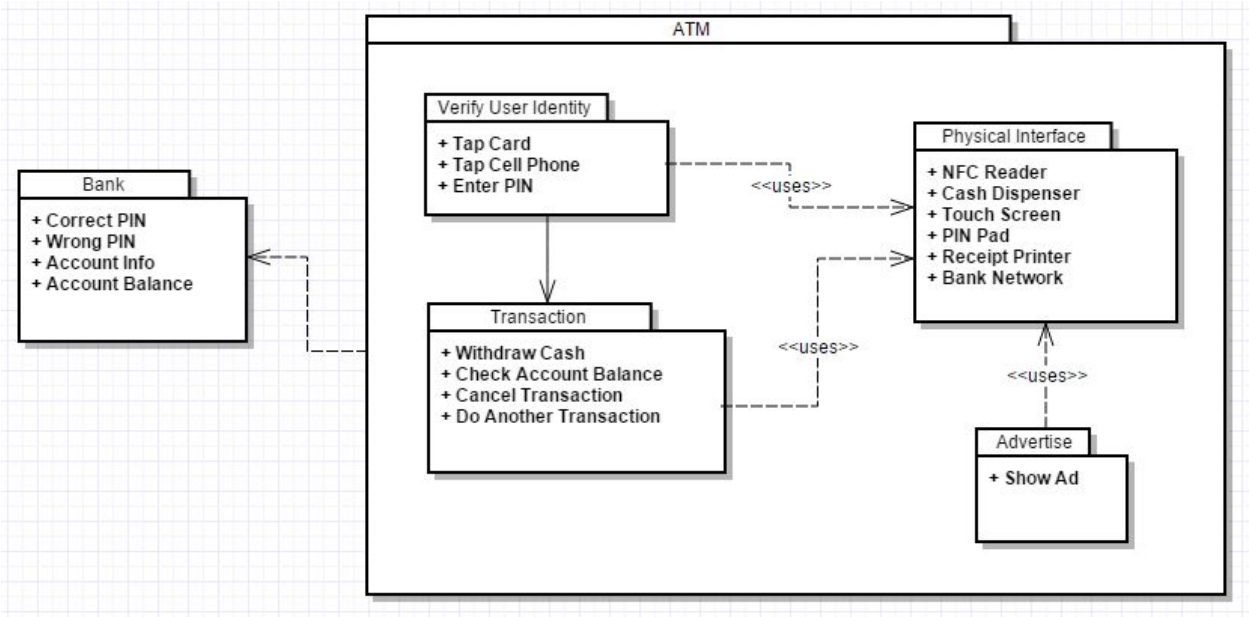
Component	**Subcomponents**
Verify User Identity	Tap card, tap cell phone, enter pin
Transaction	Withdraw cash, check account balance, do another transaction, cancel transaction
Bank	Correct PIN, wrong PIN, account info, account balance
Advertise	Show ad
Physical Interface	NFC Reader, cash dispenser, touch screen, PIN pad, receipt printer, bank network

Question 3

The “Verify User Identity”, “Physical Interface”, “Advertise”, and “Transaction” components are within one package called the “ATM”. Within the “ATM” package, the “Verify User Identity” component is associated with the “Transaction” component. The “Verify User Identity”, “Transaction”, and “Advertise” components all use the “Physical Interface” component

in order to make contact with the client. The entire “ATM” package depends on the “Bank” component.

UML Package Diagram for Questions 1, 2, 3



Question 4

The components relate to the requirements by explaining in more depth of how the ATM system can accomplish the functional and ranked requirements. These components separate the main parts of the system to make it easier to view. For example, the system requires a user, a transaction, and a physical interface to perform these transactions. For these requirements, the components are listed as “Verify User Identity”, “Transaction”, and “Physical Interface”. The components help explain the functions of the system and show which methods are going to be within which class.

Question 5

Interface
Access Account
Verify User
Ads
Transaction
Print Balance