# System Analysis

**Ⅰ.Purposes**

Study ,understand and define the requirements for the ATM system(model of the system’s functional requirements).

**Ⅱ.Requirements Introduction**

According to the life of ATM business requirements and customer needs analysis, the system needs to achieve registration, login, deposit and withdrawal, query, transfer, change the password and other functions. The user can register a bank account with the identity account through the registration service and log in to the ATM system through the bank account after registration so as to save, withdraw money, check the account information and change the password in the system.

**Ⅲ.Requirements Analysis**

With the development of society, banks play an important role in people's daily life. ATM machines bring convenience to people's daily life. ATM database system makes cash machine high-speed and efficient work, less prone to data loss, statistical errors, make ATM machine more safe and convenient. The company is located in:This database system includes the functions of opening an account, depositing, withdrawing money, transferring money, inquiring about, changing a secret, etc., Among them has used the database stored procedure knowledge.

**Ⅳ.ATM System’s functional requirements**

**1. Login**

Login system needs to retrieve all user information. The system design must ensure that the user's security, once logged in can be done after login function. Only enter the account number and password in the case can log in successfully. When you log in to retrieve all the logged-in user's information, make sure that you are logged in to enter the account and the password is entered correctly.

**2. Search**

System inquiries business, in the case of the log in before they can conduct this business. When querying for information, the information of the account in the file is directly retrieved according to the account, and the user's name and account number and the balance in the account are prompted.

**3. Password modify**

System password to modify the business, to log in the case can be carried out this business. Enter the original password, then enter the revised password, and then confirm the new password to complete the business. Here you need to modify user data and save it in a file. Direct access to information here, modify the data and then save it to a file.

**4. Transfer**

System of the transfer business, to log in the case can be carried out this business. To accurately enter each other's account and enter the amount of transfer, and determine the transfer can be successful. Here you need to modify and save the two user data. Complete this business, you can enter the other account to find and match, and then modify the value of the two nodes are the last to save.

1. **Service selections**

With the rapid development of society, more and more foreigners come to China to work, study or travel. So if foreign friends want to use ATM machines, they can do business by choosing English services.This is service selections mean.

1. **Print receipt**

When the customer completes the deposit, withdrawal or transfer business, the ATM machine should provide the service of printing receipts. These receipts can sometimes be powerful evidence when a customer is defrauded or wrongly transferred.

1. **Deposit and withdraw**

The most basic function that ATM system should have. Customers can save money or take out money by using ATM machines.

1. **Binding with phone numbers**

When money is transferred into personal accounts by ATM system. Or when the money in personal accounts are taken out by ATM system, the customer's binding phone number will receive messages.

**Ⅴ.The Boundary of requirements**

1. **Login Problem**

For a user, he should put the card in first, then he can login by input

his own password according the account. If the user input correctly, he can login her account successfully, else when he input wrong password three times, his card will be frozen today. The user can only try his password at the artificial window in the same day. Or, he can have try again tomorrow. If he have try 9 times in three consecutive days, this account will be frozen forever.

1. **Search Problem**

When a user put his card in and input correct password, the ATM machine enter the main page which contains the user name and functions.

If the user choose the search button, the page enter a new page which only shows the user’s name and the account balance.

1. **Password modify Problem**

Modify the password should base on the user having logged in.On the main page, the user choose the modify password button.ATM machine enter a new page. First, he should input the old password, then input new password, and then input new password again.If two input are not same, it will show a notice to warn the user.If they are same, user press the confirm button, the new account information will be save in the ATM database.

1. **Transfer Problem**

The user put his card in and input correct password,then enter the main page. Press the transfer button, user can see a new page. In this page, user should choose Intra-bank transfer or inter-bank transfer.And two ways of transfer,ATM machine will deduct certain fees according provisions. Then input the account card number that he wants to transfer. Then choose transfer amount or input custom amount. According the China UnionPay announced on June 8, 2015, ATM cross-bank transfer business limit is 50,000 yuan per day. The user transfer limitation should not exceed 50,000 by the provisions.After the these steps, the ATM machine will show the account name and user should ensure the and the number match or not.

1. **Service selections Problem**

A user put his card in, the first page shows to him is to shoose language. Currently, our ATM machine only provide two languages: Chinese and English.

1. **Print receipt Problem**

When the user finishes any business, ATM should show whether to print the credentials before the card is withdrawn. If you choose Yes, ATM should print this transaction flow and export it to the user from the credential outlet. If you choose No, ATM can be directly back to the user card.

1. **Deposit and withdraw Problem**

Deposit: user choose deposit business on the main page. On new page, it should notice user that the machine only accept 100 yuan.Then the ATM open the banknotes entrance neatly.ATM machine check the authenticity of banknotes and calculate the amount of banknotes that can be read in.After this step, screen will show the amount of money and return the money it can not read.

Withdraw: user first choose withdraw business on the main page.Then choose transfer amount or input custom amount.Then choose transfer amount or input custom amount.According different bank provisions, the amount of withdraw limitation should be set well in advance.

**8. Binding with phone numbers Problem**

When the user account’s balance changed, the phone which he set for this card will received a message.Message content contains balance and process amount.