Quikr srs

Software Requirements Specification

For

QUIKR.COM

Lovely Professional University

Quikr - software requirement specification srs

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Software Requirements Specification for - ii -

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1.Introduction

1.1 Purpose

This document describes the software requirements and specification for Quikr.com.

1.2 Document Conventions: font: TNR 11

1.3 Intended Audience and Reading Suggestions (Intended audience is defined as

the group of people for which a service or product is designed)

The document is intended for all the stakeholders' customer and the developer (designers, testers,

maintainers). The reader is assumed to have basic knowledge of banking accounts and account

services. Knowledge and understanding of UML diagrams is also required.

1.4 Definitions, abbreviations

1.4.1 Definitions

Account

A single account on Quicker means a report or description of person details. Accounts may be

of various types with at least selling or buying. A customer can hold more than one account.

QUIKR

Quikr is an Indian classified advertising platform. It was founded by Pranay Chulet and Jiby Thomas in 2008,

and as of 2013 reported 12 million listings.

Feautures

Quikr provides an online classified advertising platform for users to buy or sell goods and services from

each other. Other services offered include a missed call service,[18] andinstant messaging.

Finance

A card assigned to a bank customer that authorizes access to accounts using an ATM Machine.

Each card contains a bank code and a card number, coded in accordance with national standards on

credit cards and cash cards. The card number determines the accounts that the card can access. A

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card does not necessarily access all of a customer's accounts. Each cash card is owned by a single

customer so the possibility of simultaneous use of the same card from different machines must be

considered.

Customer

The holder of one or more accounts in a site. A customer can consist of one or more persons or

corporations, the correspondence is not relevant to this problem. The same person holding an

account at a different place is considered a different customer.

Deal

We only specified that QUIKR must work purchasing and buying of old products consists of house

and everything, we may also want to provide the flexibility to operate on accounts of different

customers. The different operations must balance properly.

1.4.2 Abbreviations

Throughout this document the following abbreviations are used:

k : is the maximum purchase per day and account.

m: is the maximum sell per day per account.

n : is the minimum cash in the site to permit a sell.

t : is the total money in the Account at start of day.

1.5 Project Scope

The software supports a computerized shopping network to buy and sell products. The network

enables customers to complete simple purchasing services via automated Quikr. The Quikr provide

their own software for their own computers. The software requires appropriate record keeping and

security provisions.

Overall Description

1.6 Product Perspective

The Quikr network does not work independently. It works together with the different partners to

sell and buy and the software run by the network's sellers.

Communication interface: The software creates communication interface between different

people for purchasing and selling products.

Software interface: The messages sent via the software network are specific to the target the seller

and buyer systems

Hardware interface: The software will run on a computer.

User interfaces

Customer: The customer user interface should be used, such that 99.9% of all new users are able to

complete their work without any assistance.

Network Personnel: Bank security personnel are responsible for removing deposits and adding

cash to ATMs. There should be a simple interface (e.g., a switch or button) that they can use to

initialize the ATM whenever they restock.

Maintainer: The maintainer is responsible for adding new ATMs to the network and servicing

existing ATMs. A maintainer should be possible to add a new ATM to the network within 1 hour.

1.7 Product Features

The ATM should work 24 hrs. The ATM identifies a customer by a cash card and password. It

collects information about a simple account transaction (e.g., deposit, withdrawal, transfer, bill

payment), communicates the transaction information to the customer's bank, and dispenses cash to

the customer. The banks provide their own software for their own computers. The bank software

requires appropriate record keeping and security provisions. The software must handle concurrent

accesses to the same account correctly.

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1.8 User Classes and Characteristics

Characteristics: There are several users of the ATM network:

Customers are simply members of the general public with no special training.

Bank security personnel need have no special education or experience.

Maintainers must be experienced network administrators, to be able to connect new ATMs to the

network.

1.9 Operating Environment

The hardware, software and technology used should have following specifications:

Ability to read the ATM card

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Ability to count the currency notes

Touch screen for convenience

Keypad (in case touchpad fails)

Continuous power supply

Ability to connect to bank's network

Ability to take input from user

Ability to validate user

1.10 Design and Implementation Constraints

Login

Validate Bank Card:

Validate for Card Expiration Date

Validate that the card's expiration date is later than today's date

If card is expired, prompt error message "Card is expired"

Validate for Stolen or Lost Card:

Validate that the card is not reported lost or stolen

If card is lost, prompt error message, "Card has been reported lost"

If card is stolen, prompt error message, "Card has been reported stolen"

Validate for Disabled Card:

Validate that the card is not disabled

If card is disabled, prompt error message, "Card has been disabled as of "

Validate for Locked Account:

Validate that the account is not locked

If account is locked, prompt error message "Account is locked"

Validate PIN:

Validate that the password is not blank

If PIN is blank, prompt error message "Please provide PIN"

Validate that the password entered matches the password on file

If password does not match, prompt error message "Password is Incorrect"

Lock Account:

If number of consecutive unsuccessful logins exceeds three attempts, lock account

Maintain Consecutive Unsuccessful Login Counter

Increment Login Counter

For every consecutive Login attempt, increment logic counter by 1.

Reset login counter to 0 after login is successful.

Get Balance Information

Withdraw Cash

Transfer Funds

2.6 Assumptions and Dependencies

Hardware never fails

ATM casing is impenetrable

Limited number of transactions per day (sufficient paper for receipts)

Limited amount of money withdrawn per day (sufficient money)

2. Specific Requirements

2.1 Functional Requirements

The functional requirements are organized in two sections First requirements of the ATM and

second requirements of the bank.

2.1.1 Requirements of the automated teller machine

The requirements for the automated teller machine are organized in the following way General

requirements, requirements for authorization, requirements for a transaction.

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General

Functional requirement 1:

   Description: Initialize parameters t, k, m, n

   Input: ATM is initialized with t dollars, k, m, n are entered

   Processing: Storing the parameters.

   Output: Parameters are set.

Functional requirement 2:

   Description: If no cash card is in the ATM, the system should display initial display.

Functional requirement 3:

   Description: If the ATM is running out of money, no card should be accepted. An error

message is displayed.

   Input: A card is entered.

   Processing: The amount of cash is less than t.

   Output: Display an error message. Return cash card.

   Authorization: The authorization starts after a customer has entered his card in the ATM

Functional requirement 4:

   Description: The ATM has to check if the entered card is a valid cash-card.

   Input: Customer enters the cash card.

Processing: Check if it is a valid cash card. It will be valid if

The information on the card can be read.

It is not expired.

Output: Display error message and return cash card if it is invalid.

Functional requirement 5:

Description: If the cash card is valid, the ATM should read the serial number and bank

code.

Input: Valid cash card.

Processing: Read the serial number.

Output: Initiate authorization dialog

Functional requirement 6:

Description: The serial number should be logged.

Input: Serial number from cash card

Processing: Log the number.

Output: Update to log file.

Functional requirement 7:

Description Authorization dialog: The user is requested to enter his password. The ATM

verifies the bank code and password with the bank computer

Input: Password from user, bank code from cash card.

Processing: Send serial number and password to bank computer, receive response from

bank.

Output: Accept or reject authorization from bank.

Functional requirement 8:

Description: Different negative answers from bank computer for authorization dialog.

Input: Response from bank or authorization dialog:

-"bad password" if the password was wrong. -"bad bank code" if the cash card of the bank is not supported by the ATM. -"bad account" if there are problems with the account.

Processing: If the ATM gets any of these messages from the bank computer, the card will

be ejected and the user will get the relevant error message.

Output: Card is ejected and error message is displayed.

Functional requirement 9:

Description: If password and serial number are ok, the authorization process is finished.

Input: The ATM gets accept from the bank computer from authorization process.

Processing: Finishing authorization.

Output: Start transaction dialog.

Functional requirement 10:

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Description: If a card was entered more than three times in a row at any ATM and the

password was wrong each time, the card is kept by the ATM. A message will be displayed

that the customer should call the bank.

Input: Entering a wrong password for the fourth time in succession

Processing: Initiate authorization process Response from bank computer is to keep the card.

Output: Display error message that the customer should call the bank.

Functions: These are the requirements for the different functions the ATM should provide after

authorization.

Functional requirement 11:

Description: The kind of transactions the ATM offers is: withdrawal

Input: Authorization successfully completed. Enter the amount to withdraw.

Processing: Amount entered is compared with m.

Output: Amount of money to be dispensed is displayed. Begin initial withdrawal sequence.

Functional requirement 12:

Description: Initial withdrawal sequence. If it is too much withdrawal redo the transaction.

Input: Customer has entered the amount of money.

Processing: Error if the amount is greater than m.

Output: Start transaction or re-initiate transaction dialog if the amount is not within the pre

defined transaction policy.

Functional requirement 13:

Description: Perform transaction.

Input: Initial withdrawal sequence successful.

Processing: Send request to the bank computer.

Output: Wait for response from the bank computer.

Functional requirement 14:

Description: If the transaction is successful, the money is dispensed.

Input: ATM gets message "transaction succeeded" from the bank computer.

Processing: ATM prints receipt, updates t and ejects the card. Dialog: Customer should take

the card.

Output: After the Customer has taken the card the money is dispensed.

Functional requirement 15:

Description: If the money is dispensed, collects amount.

Input: The amount requested is dispensed to the customer.

Processing: the attaches the amount of money against the serial number of the card.

Output: Amount together with the serial number. Response sent to bank for money

dispensed.

Functional requirement 16:

Description: If the transaction is not successful, an error message should be displayed. The

card should be ejected.

Input: ATM gets message "transaction not successful" from the bank computer.

Processing: ATM displays error message. Dialog: Customer should take the card.

Output: Eject card.

2.1.2 Requirements of the bank computer for the ATM

Authorization

The bank computer gets a request from the ATM to verify an account.

Functional requirement 1:

   Description: The bank computer checks if the bank code is valid. A bank code is valid if

the cash card was issued by the bank.

   Input: Request from the ATM to verify card (Serial number and password.)

   Processing: Check if the cash card was issued by the bank.

   Output: Valid or invalid bank code.

Functional requirement 2:

   Description: If it is not a valid bank code, the bank computer will send a message to the

ATM.

   Input: Invalid bank code

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   Processing: Process message

   Output: The bank computer sends the message "bad bank code" to the ATM.

Functional requirement 3:

   Description: The bank computer checks if the password is valid for a valid cash card.

   Input: Request from the ATM to verify password.

Processing: Check password of the customer.

Output: Valid or invalid password.

Functional requirement 4:

Description: If it is not a valid password, the bank computer will send a message to the

ATM.

Input: Invalid password.

Processing: Process message. Update count for invalid password for the account

.

Output: The bank computer sends the message "bad password" to the ATM.

Functional requirement 5:

Description: If it is a valid cash card and a valid password but there are problems with the

account, the bank will send a message to the ATM that there are problems.

Input: Valid cash card and password.

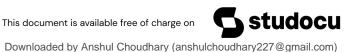Processing: Process message.

Output: The bank sends "bad account" to the ATM.

Functional requirement 6:

Description: If it is a valid cash card a valid password and there are no problems with the

account the bank computer will send a message to the ATM that everything is ok.

Input: Valid cash card password and account.

Processing: Process message.

Output: Send "account ok" to the ATM

Transaction

The bank computer gets a request to process a transaction from the ATM.

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Functional requirement 7:

Description: After a request the bank computer processes the transaction.

Input: Request to process a transaction on an account and amount m to withdraw.

Processing: Process transaction (together with the software of the bank.) Update k for

amount.

Output: If transaction succeeded, the bank computer sends the message "transaction

succeeded" to the ATM. If not, it will send "transaction failed".

Functional requirement 8:

Description: Update account after money is dispensed.

Input: Response from ATM about money dispensed.

Processing: Updates account.

Output: New account record

Functional requirement 9:

Description: Each bank has a limit k for each account about the amount of money that is

available via cash card each day monthly.

Input: Request to process transaction.

Processing: Check if the amount of money doesn't exceed k

Output: If the amount exceeds the limit, the transaction will fail.

Functional requirement 10:

Description: The bank only provides security for their own computer and their own

software.

3. External Interface Requirements

3.1 User Interfaces

The customer user interface should be intuitive, such that 99.9% of all new ATM users are able to

complete their banking transactions without any assistance

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3.2 Hardware Interfaces

The hardware should have following specifications:

Ability to read the ATM card

Ability to count the currency notes

Touch screen for convenience

Keypad (in case touchpad fails)

Continuous power supply

Ability to connect to bank's network

Ability to take input from user

Ability to validate user

3.3 Software Interfaces

The software interfaces are specific to the target banking software systems.

4. Other Nonfunctional Requirements

4.1 Performance Requirements

It must be able to perform in adverse conditions like high/low temperature etc.

Uninterrupted interrupted connections

High data transfer rate

4.2 Safety Requirements

Must be safe kept in physical aspects, say in a cabin

Must be bolted to floor to prevent any kind of theft

Must have an emergency phone outside the cabin

There must be an emergency phone just outside the cabin

The cabin door must have an ATM card swipe slot

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• The cabin door will always be locked, which will open only when user swipes his/her

ATM card in the slot & is validated as genuine

4.3 Security Requirements

Users accessibility is censured in all the ways

Users are advised to change their PIN on first use

Users are advised not to tell their PIN to anyone

The maximum number of attempts to enter PIN will be three

4.4 Software Quality Attributes

Security. Performance.

5.4.1 Availability: The ATM network has to be available 24 hours a day.

5.4.2 Security: The ATM network should provide maximal security .In order to make that much

more transparent there are the following requirements:

1. It must be impossible to plug into the network.

5.4.3 Maintainability: Only maintainers are allowed to connect new ATMs to the network.

5. Other Requirements

6.1 Data Base

The ATM must be able to use several data formats according to the data formats that are provided

by the data bases of different banks. A transaction should have all the properties of a data base

transaction (Atomicity, Consistency, Isolation, Durability).