



Paytm - software requirement specification srs

Software Engineering (Lovely Professional University)

SOFTWARE REQUIREMENT SPECIFICATION DOCUMENT

PAYTM

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1. INTRODUCTION

1.1 Purpose

Paytm is an Indian e-commerce website headquartered in Noida, India. Founder and CEO of Paytm is Mr. Vijay Shekhar Sharma. It was launched in 2010 and adds to the industry of FinTech in India. It is owned by One97 Communications. The firm started by offering mobile recharging, adding bill payment and e-commerce, with products similar to businesses such as Amazon, Flipkart, Snapdeal. In 2015, it further added booking bus travel. Paytm also launched movie ticket booking by partnering with Cinepolis in the year 2016. The Alibaba Group was the biggest stakeholder in Paytm parent company One97 Communications.

1.2 Scope

With current payments ecosystem and infrastructure, wallets cannot be wholesome payments instrument anytime soon. Instead of getting into consumer wallet business, it would be worthwhile to create a smartphone friendly payment network which will address interoperability issues for banks and merchants. That's a Meta problem to be solved. But after Demonetization in November 2016 Paytm became India's largest mobile payment service platform with over 150 million wallets and 75 million android based app downloads as of November 2016. After 8 November 2016, PayTm's transactions and profit increased significantly.

1.3 Overview

Up to this document, Project Description Document, Software Project Management Plan (SPMP) and Software Requirements Specification (SRS) have been released. In this document, detailed design of the system with user interfaces will be described. In section 3; Decomposition of the system with module decomposition, concurrent process decomposition and data decomposition is given, in section 4; Dependency Description is given, in section 5; User Interface Description can be found and finally in section 6 Detailed Design of the system is provided.

1.4 Definitions, Acronyms and Abbreviations

- Customer :

Mean a person who has registered with Paytm for availing the Paytm Wallet and who has accepted these Terms and Conditions and, owns/operates/has access to an internet compatible device that supports the Paytm Wallet.

- Paytm Wallet :

Paytm Wallet means the pre-paid payment instrument issued by Paytm including Basic Account and Prime Account.

- Person-to-Person Transfer :

Refers to a facility to transfer funds from a Paytm Wallet to any other Paytm Wallet issued by Paytm or to any savings or current bank account.

- Merchant Establishment :

Shall mean and include physical Merchants, remote Merchants and any other outlet that has been authorized by Paytm to accept payment using Paytm Wallet.

- Enrolment Form :

Shall mean the Paytm Wallet Enrolment Form, as is required by Paytm from the Customer at the time of Registration for availing and / or continuation of the Paytm Wallet.

- Basic Account :

Means Customer Paytm Wallet classified as Semi-closed system payment instruments issued by accepting minimum customer details being Customer name, Email address, mobile number, which permit payment and domestic money remittance as per RBI direction on Issuance and Operation of Pre-paid Payment Instruments in India (Reserve Bank) Directions, 2009 as amended and supplemented by the RBI from time to time.

- Prime Account :

Means Customer Paytm Wallet which is KYC compliant and classified as Semi-closed system payment instruments which permit Person-to-Person transfer and payment to all identified Merchant as per RBI direction on Issuance and Operation of Pre-paid Payment Instruments in India (Reserve Bank) Directions, 2009 as amended and supplemented by the RBI from time to time.

- KYC :

Stands for Know your Customer and refers to the various norms, rules, laws and statutes issued by RBI from time to time under which Paytm is required to procure personal identification details from you before any services can be delivered. Know your Customer (KYC) documents may be required by Paytm from the Customer at the time of Registration and/ or on a later date, for availing and / or continuation of the Paytm Wallet.

- Password :

Means the secret password used to secure Paytm Wallet applications, without knowledge of which your Paytm Wallet will not be operable.

- Transaction :

Means Person-to-person transfer or purchase of goods or services at Merchant establishments or equivalent amount of money-in Paytm Wallet, if goods or services not available.

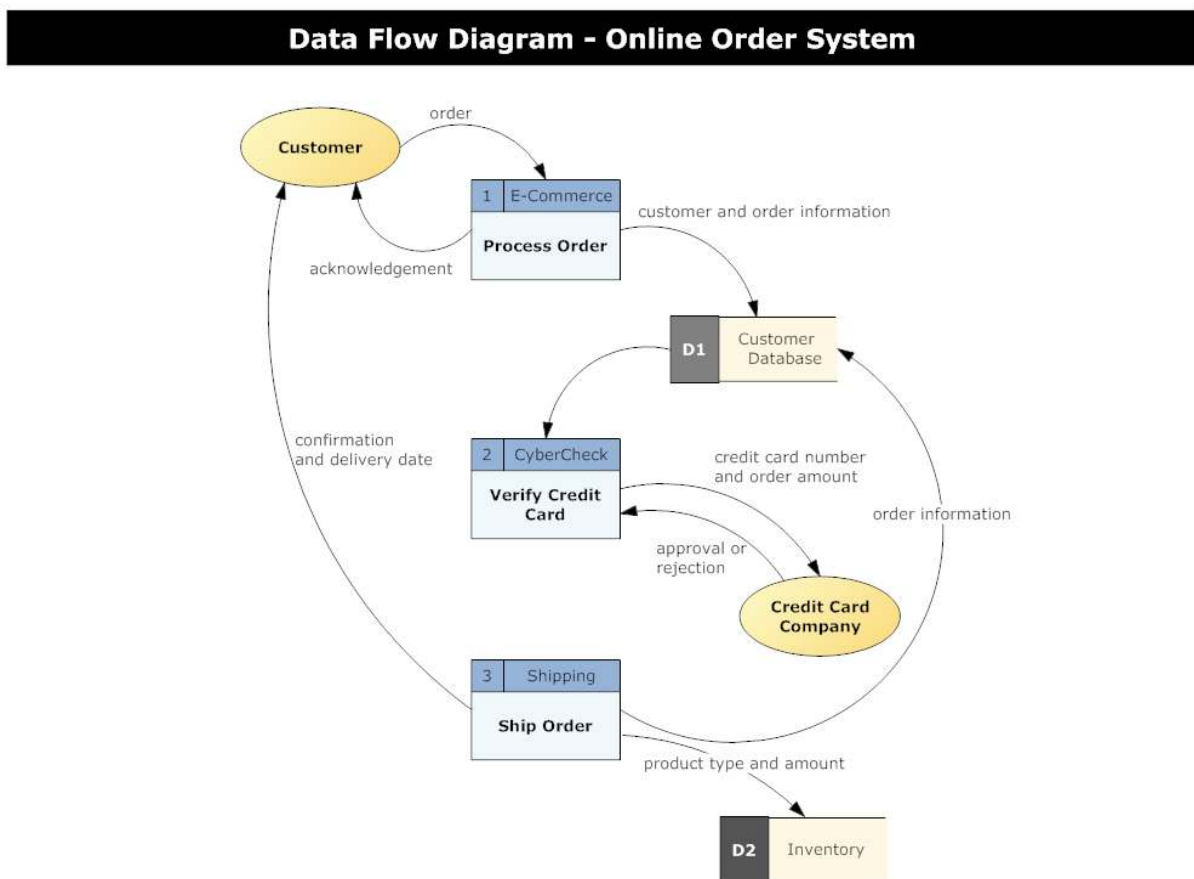
- Person-to-bank transfer :

Refers to a facility to transfer funds from a Paytm Wallet to any Bank Account.

- RBI :

Means the Reserve Bank of India.

Data Flow Diagram



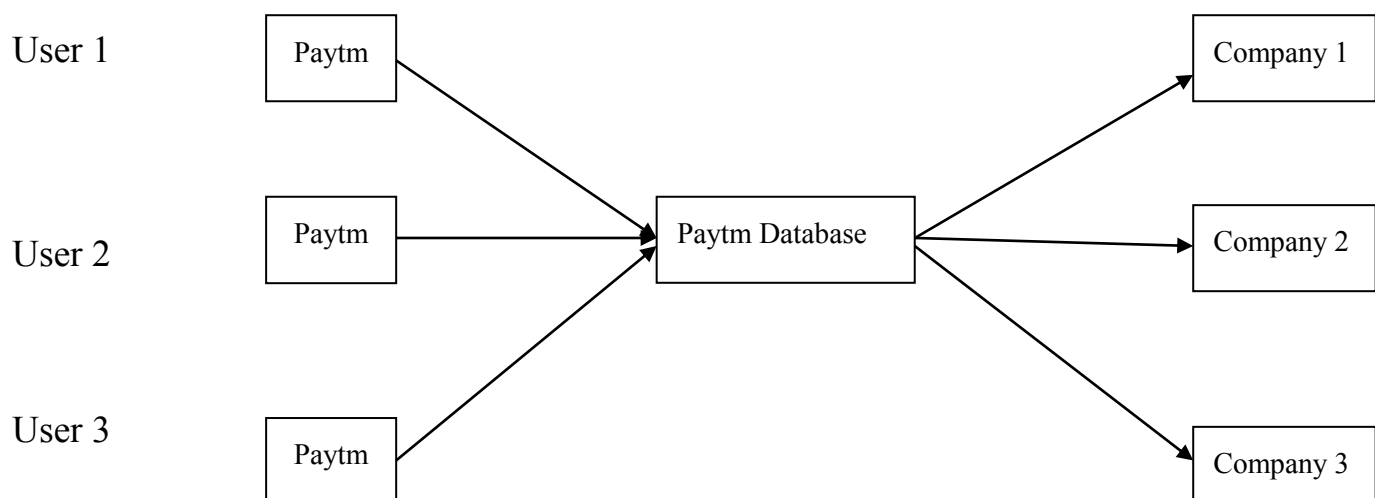
2 General Description

2.1 Product Perspective

The Paytm network doesn't work independently. It has to work with the computer /software owned by the Paytm. They are clearly defined interfaces for the different systems.

2.2 Product Functions

The software should support a mobile payment network. Each paytm account has its own data in database to maintain its accounts and process transaction. When we Login paytm account it communicate with the paytm's database. In paytm wallet we can add money by Debit card , Credit Card, NetBanking. The Paytm account requires appropriate details to keep secure our wallet. We can also transfer our wallet money to bank account.



2.3 User Characteristics

There are several users of the Patym Network

- Customers

Customer interacts with the Paytm network via app/website. It must be very easy to use the Paytm. Everyone who uses smartphone can easily use Paytm.

- Maintainer

Using Paytm is easy but to maintain it is a bit difficult. There are so many programmers/coders working together to maintain the database and the internal functions that we can't see.

3 Specific requirements

3.1 Functional Requirements

Functional Requirement 1

- Description:
Login in Paytm(Check account exist or not)
- Input:
Entered the details like, mobile number and password
- Processing:
Checking whether this account exist or not.
- Output:
Account doesn't exist. You have to sign in to create a paytm account.

Functional Requirement 2

- Description:
Add money in Paytm Wallet
- Input:
Enter the amount and choose the method via which you want to add money (like debit card, credit card.net banking)
- Processing:
Check if
 1. The card number/Net banking id is valid or not
 2. It is not expired
- Output:
Display error message that the card number/Net banking id is invalid

Functional Requirement 3

- Description:
Error occur during the payment
- Input:
Enter the amount (n) you want to pay.
- Processing:
Check whether paytm wallet contains n amount or not.
- Output:
If wallet contains valid money then payment successful, otherwise payment unsuccessful.

Functional requirement 4

- Description:
Problems or error comes during transferring money from wallet to bank.
- Input:
Enter amount, account holder's name, account number,,IFSC code
- Processing:
Check if
 1. Account details are right or not
 2. And amount of transferring money is valid or not
- Output:
Transferring is cancelled, display account details is wrong

Functional requirement 5

- Description :
To pay money to shopkeeper
- Input:
Phone number/QR code of shopkeeper and the amount
- Processing:
Transferring money to Shopkeeper's paytm account
- Output:
Payment Successful

Functional Requirement 6

- Description:
Create a link to accept paytm money from others
- Input:
Sender's phone number and amount

- Processing:
Send the link to sender to transfer money to your Paytm account
- Output:
Payment received

Functional requirement 7

- Description :
Mobile recharge/dish recharge
- Input:
Phone number and amount to recharge
- Processing:
Contact the service provider and recharges the phone and deducts money from your paytm wallet.
- Output:
Recharge successful

Functional requirement 8

- Description:
Bill payment of electricity/gas/water bill
- Input:
Select type of bill, bill number and customer number
- Processing:
Checks the amount to be paid and transfers the money to the specified company
- Output:
Payment successful

Functional requirement 9

- Description:
Opens the portal of online shopping
- Input:
Select the item to be bought
- Processing:
Generates the bill of the item and sends the prompt to the seller and ask the customer to payment
- Output:
Transaction done and item will be delivered by estimate date

Functional requirement 10

- Description:
Online booking of movies/bus/trains/flights tickets
- Input:
Enter your date and place and then select your seat
- Processing:
Contact the host and generates the ticket a deductes the money from paytm wallet
- Output:
Ticket has been generated.

3.2 USER INTERFACE DESCRIPTION

Web Technologies used to develop Paytm

1. Server Side Programming - Javascript
2. Client Side Programming - Javascript
3. HTML5

4. Character encoding-UTF 8
5. Image Format-JPEG format
6. Site Elements
 - 6.1 Embedded CSS
 - 6.2 Inline CSS
 - 6.3 Cookies expiring in hours
 - 6.4 Non-HttpOnly Cookies
 - 6.5 Non-Secure Cookies
 - 6.6 Gzip Compression
 - 6.7 Weak ETag
 - 6.8 HTTP Strict Transport Security
7. SSL Certificate Authority-Geo Trust
8. Web Servers- Nginx , Node.js
9. Web hosting Provider - Amazon

- Paytm is the leading mobile, data recharges and bill payments service in India. It has a new user interface, a new feature called *Fast Forward* and new billers now.

#1 New user interface

The user interface has been *revamped completely*, is simple and shows everything necessary in one single page. The Paytm logo has also been given a revamp.

#2 'Fast Forward' for quick recharges

There is no denying that having your Paytm cash loaded helps you make recharges within seconds. Patym cash has been useful till date and is still in use. *Fast Forward* is a new option in the recharge section that helps you make recharges in one click. After you enter the recharge details, enable the *Fast Forward* option, available below in the recharges section, to immediately make the recharge. You should make sure that your Paytm cash is loaded, or you will face troubles.

3.3 Performance Requirements

Performance Requirement 1

- Description:

Error message should be displayed at least 30 sec

Performance Requirement 2

- Description:

If there is no response from the paytm database after a request within 2 minutes the payment is cancelled with error message.

3.4 Attributes

3.4.1 Availability

The paytm servers should be in working condition 24*7 without any server problems.

3.4.2 Security

Paytm wallet should provide maximal security. User data like username, password, account balance should be transferred over safely using high level encryption.

3.4.3 Maintainability

Only maintainers are allowed to check our paytm details. Maintainers are basically the system administrators, so, no other user should be allowed to do so.