Chapter 1

INTRODUCTION

Software development is an expensive process due to the entity of risk that appears as a part of all software development processes. These risks arise when there are constraints to creating high quality software within a definite time. Understanding these constraints and clearly understanding the problem statement from all viewpoints is an important part of SDLC. These risks are magnified in RAD to high time constraints and reduced clarity in the understanding the problem. The consequence of these risks in any SDLC is the failure of the project[1]. A systematic understanding of the problem domain, powerful risk management tools and standardised practices help to minimize failures. The analysis of risk is to be done at every stage in the SDLC to minimize the costs such as correction, redeployment, etc. of the project.

1.1   MOTIVATION

Time shortage has led to a lot of changes in the process of software development. Rapid Application Development is one of the most widely used strategies for Software Development with these limitations in place. But with these developments there have been cases of failures in projects and the success rate has fallen. This is a serious damage when it comes to the IT industries. The system proposed improves the Requirement Engineering phase of the paper and improves the development strategy by a lot of paces. This system is effective in terms of time, cost and is well managed in terms of reducing errors and risks[3].

1.2   EXISTING SYSTEMS

In the existing system, the client logs into his account with his/her login credentials like email id and password. If he/she wishes to recharge, a recharge request is generated and sent to the server. The server processes the request and facilitates the recharge.

Client side:

- User logs into account by providing his/her login credentials.
- Generates a new recharge request with mobile number and recharge amount
- Sends recharge request.

Server side:

- Client request is stored at database.

- Process the request by sending a message to operator to complete recharge using SMSC(short message service center) server through recharge sim.

- Acknowledgment and store status report in database.

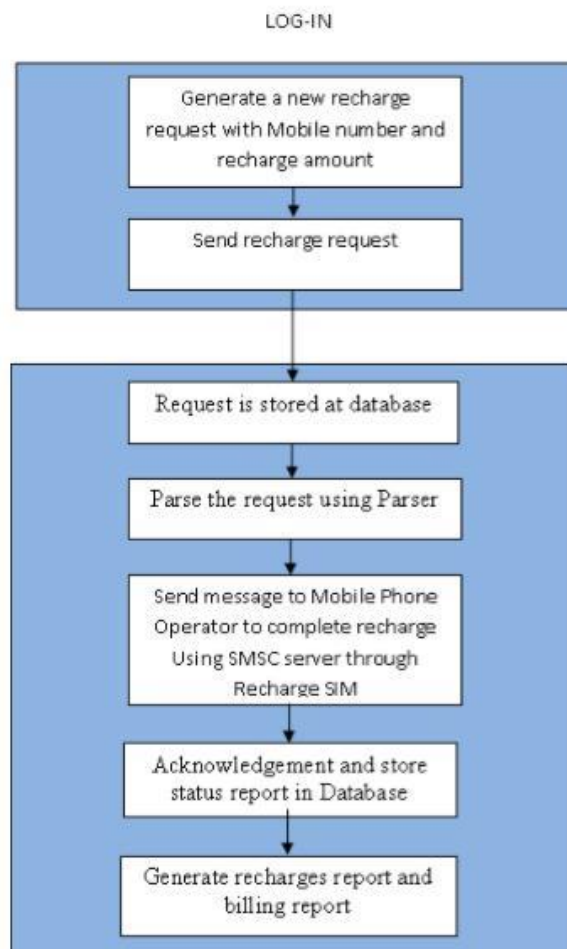- Generate recharge report and billing amount.

LOG-IN

Generate a new recharge request with Mobile number and recharge amount

Send recharge request

Request is stored at database

Parse the request using Parser

Send message to Mobile Phone Operator to complete recharge Using SMSC server through Recharge SIM

Acknowledgement and store status report in Database

Generate recharges report and billing report

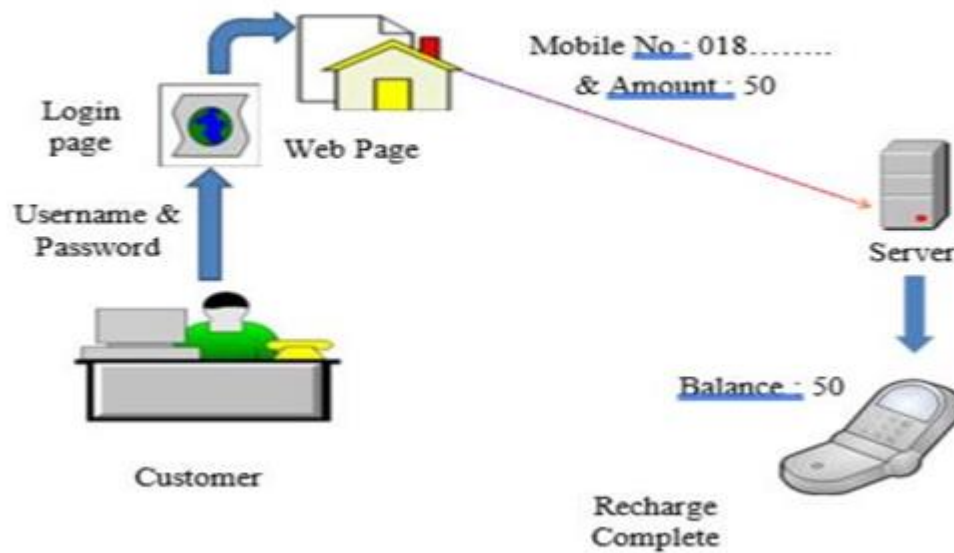**Fig 1.1: Methodology of the existing system**

Fig 1.2: Existing System Working

1.3 LIMITATIONS

- Need a good internet connectivity at the time of recharge.

- You need to note down the transaction details in case of failed transactions.

- There is always the limitation of running out of balance in an emergency situations.

- There might be connection breakdown when connecting from the payment gateway to the bank server.

1.4 PROPOSED SYSTEM

- There is always a risk in using credit/debit card details on web portals.

- Even the most secure payment gateway using encryption has the risk to be hacked.

- In the proposed system, we try to minimize the risk by automating the recharge process using digital wallet and totally removing the usage of credit/debit card details for payment.

- The automation is done when a certain threshold is reached.

2 types of threshold:-

- Time based
- Volume based

TIME BASED THRESHOLD

- When a certain time period has expired, the system will inform the user by sending a SMS containing related information.

VOLUME BASED THRESHOLD

- When the specified volume has expired, the system will inform the user by sending a SMS containing related information.
- When either of the threshold is exceeded, the recharge is done automatically by deducting the amount from the digital wallet.
- The digital wallet is linked with the users bank account by using his registered mobile no. i.e., using UPI(Unified Payment Interface).
- At the start of the every month the digital wallet is loaded with certain amount of money directly from bank account.

1.5 CONTRIBUTION

This work mainly concentrates on making the online recharge system a more efficient and easier process. It also removes the burden from the user of doing recharge manually every time.

The user need not input his/her credit or debit card details every time he/she wishes to recharge his/her mobile. He/she only needs to load money in the wallet once and the system takes care of the recharge process by automating the recharge process.

SUMMARY

This chapter briefly discussed about the existing system and the limitations. It also discusses about the outcomes of the proposed system. A brief idea about digital wallets is mentioned along with the advantages of using it in our system. The main component that is the Web Portal of the proposed system is explained.