# Chapter 1

# Introduction

## 1.1 Need for the new system

- In CareAtHome.com it provides new feature where user can store personal health related reports like medical history, lab reports, Medical bills etc.
- Member can also buy or take as rent surgical items such as wheel chair, Electric bed, Gatch bed etc. Also book doctor's Appointment, buy medicines, labs report, caretaker service at home is also provided. Member can pay the amount using PayPal or cash on delivery.
- If member want to buy any pharmaceutical drug prescription is needed.

## 1.2 Detailed Problem Definition

- We provide surgical items on rent or for sell also.
- Laboratory can also upload reports of members personally. Member can also consult doctor, take appointment of doctor etc.
- The main problem was that user can't store the reports related to the medical issues but now it will possible.

## 1.3 Viability of the System

- In CareAtHome.com user can also store personal health details like when that person has updated his checkup-reports. Member can also use the facility like service of nurse at home, member can also buy the medical tools like wheel chair, Electric bed, Gatch bed etc. or can use as rent.

## 1.4 Currently available Systems

- *https://play.google.com/store/apps/details?id=com.aranoah.healthkart.plus*
- Name=1mg

- Symbol = 

Fig 1. 1Mg

## 1.5 Future Prospects

- Also in pursuit of developing a mobile application for the same can be done which will result in better usability and increased user base.
- In future the feature of Pill Reminder.

# Chapter 2

## Requirement Analysis

### 2.1 Requirement Analysis

- Member can also buy medical tools or can use as rent.
- Member will login or register through OTP for security purpose.
- Member will also get the knowledge of new inventions in medical sector.

Users/User Functionality:

1. Admin

- Register
- Login
- Manage Members
- Manage Laboratory
- Manage Medical shop
- Manage surgical Shop
- Register doctor
- Manage feedback
- Manage state & area also
- report

2. Doctor

- Register
- Login
- Manage Appointments

- Give prescription to particular member
- Upload Prescription
- Manage availability
- Manage report history
- Suggest report to patient

3. Member

- Register
- Login
- Search Doctor categories-wise, Experience and nearby features
- Book an appointment of doctor for home and clinic.
- Buy Medicines
- Buy/Rent Surgical items
- Book Laboratory
- View particular report
- View Laboratory reports
- Book Caretaker
- Upload his success story in medical department
- Give feedback
- Report

4. Medical Store

- Register
- Login
- Manages availability of Medicines
- Manage orders
- Manage delivery of the medicines

- Report

5. Surgical Store

- Register
- Login
- Manage product for Rent or Sell
- Manage order
- Manage returns
- Manage billings
- Product availability
- Report

6. Patient manager

- Register
- Login
- Add her/his details
- Manage Booking
- Report

7. Laboratory

- Register
- Login
- View appointments
- Manage reports
- Manage Payment

8. Delivery Person

- Register
- Login

- Deliver the medical & surgical items
- Status
- Report
- Feedback

## 2.2 Project Model:

SPIRAL MODEL:-

- The spiral model is similar to the incremental model, with more emphasis placed on risk analysis. The spiral model has four phases: Planning, Risk Analysis, Engineering and Evaluation. A software project repeatedly passes through these phases in iterations (called Spirals in this model). The baseline spiral, starting in the planning phase, requirements are gathered and risk is assessed. Throughout this article we will take a deeper dive into the iterative model, including where it originated from, how the process is actually implemented within a project, and both the advantages and disadvantages that can arise from its use.

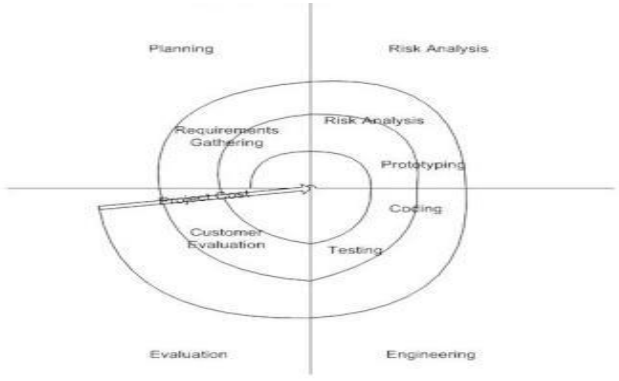


Fig 2. Spiral Model

- **Planning Phase**: Requirements are gathered during the planning phase. Requirements like ‘BRS’ that is ‘Business Requirement Specifications’ and ‘SRS’ that is ‘System Requirement specifications’.
- **Risk Analysis**: In the risk analysis phase, a process is undertaken to identify risk and alternate solutions. A prototype is produced at the end of the risk analysis phase. If any risk is found during the risk analysis then alternate solutions are suggested and implemented.
- **Engineering Phase**: In this phase software is developed, along with testing at the end of the phase. Hence in this phase the development and testing is done.
- **Evaluation phase**: This phase allows the customer to evaluate the output of the project to date before the project continues to the next spiral.

Advantages of Spiral model:

- High amount of risk analysis hence, avoidance of Risk is enhanced.
- Good for large and mission-critical projects.
- Strong approval and documentation control.
- Additional Functionality can be added at a later date.
- Software is produced early in the software life cycle.

## 2.3 Schedule Representation

- Generalized project scheduling tools and technique can be applied with little modification to software projects.
- Program evolution and review techniques (PERT) and critical path method (CPM) are two project scheduling method that can be applied to software

development. Both techniques are driven by information already developed in earlier project planning activities:

- Estimate of effort.
- A decomposition of the product function.
- The selection of appropriate process model and task set.
- Decomposition of tasks.

Table 1. Schedule Representation

| ACTIVITY | START DATE | FINISH DATE |
|---|---|---|
| Requirement Analysis | 28-6-2018 | 25-7-2018 |
| System Analysis | 1-8-2018 | 1-9-2018 |
| System Design | 2-9-2018 | |
| System Coding | | |
| Testing and Integration | | |

## 2.4 Feasibility Study

- The aims of a Feasibility Study are to find out whether the system is worth implementing and if it can be implemented, given the existing budget and schedule. The input to the feasibility study is a set of preliminary business requirements, an outline description of the system and how the system is intended to support business processes. The results of the feasibility study should be a report that recommends whether or not it is worth carrying on with the requirements engineering and system development process.

### 2.4.1 Technical Feasibility

This is concerned with specifying equipment and software that will successfully satisfy the user requirement. CareAtHome is a complete web based application. The main technologies and tools that are associated with CareAtHome being freely available and the technical skills required are manageable. Time limitations of the product development and the easy to implementing using these technologies are synchronized. The technology used in can easily be access at anywhere. The technology used is php-7.2.7-src in which we don't have to take any license to use it so it technically feasible.

### Economic Feasibility

CareAtHome will have associated hosting cost and small charge will be taken by user for registration, the technology used is also free of cost only maintenance cost will be taken by surgical store, medical store if they want any changes in system.

### Legal Feasibility

CareAtHome uses freely available development tools, and provide the system as open-source system. Some small charges will be taken form users to register, and maintenance cost will be taken by surgical store, medical store if they want any changes in system.

### Environmental Feasibility

The CareAtHome meets environmental feasibility. It does not produce any type of pollution and waste so it is environmentally feasible and it also does not produce any plastic and black smoke so environment will not have any negative effect.

### Behavioral Feasibility

CareAtHome is quite easy to use and learn due to its simple and attractive interface. User also does not require any special training to operate system.