

# Inception

## 2.1. Introduction

The renowned genius Albert Einstein has said, "If I had an hour to solve a problem I'd spend 55 minutes thinking about the problem and 5 minutes thinking about the solution." This means, it is more necessary to dig deep into the problem rather than jumping to a solution. Developing efficient software falls under the same jurisdiction.

Inception is the first phase of requirements engineering. It defines the scope and nature of the problem. The principle target of this stage is to create a basic understanding of the problem, identify the people involved and comprehend the nature of the solution via communication.

For a clear perception of the software requirements, a groundwork is established involving the following steps:

- Listing down the stakeholders
- Recognizing multiple viewpoints
- Working towards collaboration
- Breaking the ice and initiating communication

### 2.1.1. Listing down the Stakeholders

According to Sommerville and Sawyer [Som97] "anyone who benefits in a direct or indirect way from the system which is being developed" is a stakeholder. This implies that stakeholders include end users of the developed software as well as people whose activities might be influenced by the tool. Towards the end of inception, the list of stakeholders is usually larger as every stakeholder is allowed to suggest one or more individuals who might be probable stakeholders for the given problem.

To identify stakeholders we consulted a number of pharmacies in Dhaka, Bangladesh and asked them the following questions:

- Who will be using the product?
- Whose work will be affected by this project?
- How will the end users be benefitted?

We identified the following stakeholders for our project.

- Pharmacy owner
- Employee
- Developer

### **2.1.2. Recognizing Multiple Viewpoints**

The list of stakeholders will contribute to the input when requirements are elicited. Every stakeholder has different views of the system and achieves different benefits when the system is developed.

#### **Pharmacy owner's viewpoints**

- User friendly
- Computer based system
- Minimum maintenance expenditure
- Dual login system: admin and standard
- Strong authentication
- Error free
- Employee database
- Employee working hours recorder
- Report of daily transaction history (admin only)
- Cash-memo system
- Expiry date tracker and notification(before 4 months of expiry date)
- Low stock alert
- Recommendation list for medicines according to customer's preference
- Search option
- Salesman database
- Sorting drugs (and other products) with respect to companies and components
- Future support from developers

#### **Employee's viewpoints**

- User friendly
- Smartphone based system
- Easy access
- Offline guidance

- Expiry date tracker and notification
- Cash memo system
- Report of daily transaction history
- Recommendation list for medicines having same component
- Search option for drug
- Sorting drugs (and other products) with respect to companies and components
- Internet browsing option

### **Developer's viewpoints**

- Easy to develop
- No ambiguous requirement
- Keeping it simple and user friendly
- Light weight

### **2.1.3. Working towards Collaboration**

Each of the stakeholder constituencies (and non-stakeholder constituency) contributes to the requirement engineering process. The greater the numbers of interactions with multiple stakeholders, the higher is the probability of inconsistency, conflicts and clashes of viewpoints. In such circumstances, requirement engineers finalize the requirements following some steps, which are listed below.

- Finding out the commonality and the conflicting points of stakeholders
- Categorizing stakeholders
- Listing down the requirements based on the stakeholder's priority points

### **Common points**

- User friendly
- Offline guidance
- Expiry date tracker and notification

- Low stock alert
- Cash memo system
- Recommendation list for medicines according to customer's preference
- Search option
- Salesman database
- Search option for drug
- Sorting drugs (and other products) with respect to companies and components

### **Conflicting Points**

- Device
- High security
- Budget
- Ease of access

#### **2.1.4. Breaking the ice and initiating the communication**

In requirements engineering, the involved individuals can be broadly divided into two clusters: the developers and the stakeholders. Coming from different backgrounds, it will be obvious that these two parties will have different points of views regarding the problem. The stakeholders have more knowledge on facing the problem. Meanwhile, the developers are experienced with providing computerized solutions. Thus, in order to obtain an efficient solution to the problem, it is important to 'loosen up' or 'break the ice' between the two groups.

Following the ideal guidelines of requirement engineering, some context free questions were asked. The context free questions help throwing light on the stakeholders of the project. The next set of questions includes the context itself so that a better understanding of the problem is obtained. The stakeholder is encouraged to voice out his/her opinions about an alternate solution and also provide recommendations to the developer's

suggestions. The final set of questions focuses on the communication activity itself.

## **2.2. Conclusion**

The intense hours of developing software is fruitful only if the users are benefitted and satisfied. Jumping into coding, right after signing up for a project throws both the clients and the developers into the risks of failure. A successful project demands a better perception of the problem. The best and easiest way to sketch out the hints of a solution is to interact with those encountering the problem itself. This is where inception phase comes.

Inception phase has given us the opportunity to create a basic understanding of the problem and perceive an abstract idea of the nature of the solution. Direct interaction with the stakeholders made us come across core points of a solution and realize the effectiveness of communication between two parties. We believe that our groundwork will help us implement an efficient solution to the problem.