

IT314 Software Engineering
Winter 2020-21

Group: 22

Question 1

Identify all the stakeholders and users of the systems. Enlist all features of the LIC Market-Driven system by each user of the system in the form of user stories. Can you prioritize them using the requirement prioritization techniques? (e.g., AHP, Numerical Assessment, MoSCoW method, etc.) How? Provide details.

Stakeholders

- Investors
- Policy Holders
- Employees
- Government
- Policy Agents
- Policymakers
- Banks

Users

Any citizen of the country is a potential user of the system. Although the requirements of the system can change according to the type of user, the interest of the user, age of the user as well as the financial condition of the user plays an important role in determining the best policy suited for the customer. As far as the company employees are considered. The policy agents will be the next most important user of the system. As they will have the most frequent usage will be made by the policy agents. Also, the interaction of policy makers with the system is important.

Policy analyzers are also important because they analyze the raw data looking at the sales and effectiveness of a policy.

User stories

- As a customer, I need an easy way of applying for the policy.
- As a customer, I should be able to authenticate myself with the required documents remotely for an easier way of authentication.

- As a customer, I need a list of all policies with details for the selection of appropriate policy as per my need
- As a customer, I need a better way of maintaining my policy and premium bill so that I don't have trouble while applying for the claim.
- As a policyholder I should be able to pay the premium of the policies periodically through the digital payment system.
- As an Analyst, I should be able to see the reports of the current policies rolled out and the premium collected in some time period so that I can submit the relevant data to the government for proper analytics,
- As a policymaker, I should be able to deploy the new policy with ease and appropriately for keeping the product up to date.
- As a customer, I should be able to compare different policies with the current policies.
- As a customer, I should be able to see the downside and upside of doing certain customization to the policy for making the best policy according to my need.
- As a customer I should be able to see the different policies I have taken and a rough idea of the total premium that i would have to pay should be visible in my profile.

We will be using the MoSCoW requirement prioritization technique.

Must have a requirement:

- As a customer, I need a list of all policies with details for the selection of appropriate policy as per my need
- As a policyholder, I should be able to pay the premium of the policies periodically through the digital payment system.
- As a policymaker, I should be able to deploy the new policy with ease and appropriately for keeping the product up to date.

Should have requirements:

- As a customer, I need an easy way of applying for the policy.
- As a customer, I need a better way of maintaining my policy and premium bill so that I don't have trouble while applying for the claim.
- As an Analyst, I should be able to see the reports of the current policies rolled out and the premium collected in some time period so that I can submit the relevant data to the government for proper analytics
- As a customer, I should be able to compare different policies with the current policies.

Could have requirements:

- As a customer, I should be able to authenticate myself with the required documents remotely for an easier way of authentication.
- As a customer, I should be able to see the downside and upside of doing certain customization to the policy for making the best policy according to my need.

Question 2

Prepare a list of market-facing technologies helpful for this project. According to you, would market-facing technologies be helpful in the proper deployment of the product? Why?

Some useful market-facing technologies:

- **Kiosk dashboard**
 - Set up kiosks on company premises so that customers can finish their tasks independently instead of waiting in queues.
- **Interactive websites and mobile apps (Android, iOS, etc.)**
 - Official company website for the use of customers (current and future) which displays information about policies offered, other features, allows login for customers to visit their profile.
 - Mobile apps for various platforms like Android, iOS, etc., can be provided for quick and easy access.
- **Customer dashboard for the customer to check their policy status, upcoming and pending premiums, policy expiry and renewal dates, etc.**
 - After the customer logs in, they can see their entire portfolio of policies and investments made at LIC.
 - Updates and notifications about upcoming deadlines, verification status, etc., can be shown here so that customers need not keep visiting the office for small tasks.
- **Use of latest social media technologies, including advertising, Google Analytics, SEO.**
 - We live in a digital world where social media has proven to be an effective tool for capturing prospective customers' attention. Advertising on such platforms has many perks, including a massive reach.

- Online advertising via Google Analytics will have us reach customers based on their search preferences.
- Search Engine Optimization to improve ranks on Google Search and have the results show up higher.
- **Use of database information for sending automated promotional emails, customer policy updates (approval, deadlines, verification)**
 - The company can use its database (after taking the customer's permission) to send promotional emails advertising about their new products and offers,
 - This service can also send updates like when the customer's policies are approved, approaching and missed deadlines, documents are verified, remaining requirements, etc.

Question 3

Suggest an effective requirement engineering framework that can be used in market-facing projects because there are no existing systems that can be analyzed for the development so we need to consider all requirements from the core.

=> As there are no previous models or packages that exist, the framework should be containing some methods to collect the data and information with the help of various 'requirement gathering' techniques i.g interview process, general advertisements, discussions with professionals, through forms etc. It should also be managing, analyzing and improving the current issues.

=> Then with these collected data which should be then refined in proper manner through 'the Requirement Elicitation Process' which would be generally reducing the waste and some additional variations and then some standard packages should be developed for different types of policies.

=> In the beginning while the customer enters the company environment seeking an insurance of some type, all the information regarding the existing policies that the customer would have taken, should be collected from the discussion with the customer.

=> Then details of the policy or package that the customer is requiring, should be extracted.

=> Then on the basis of both of the above information(requirements), some packages or policies should be selected which could be suitable for the customer and these packages should be properly conveyed to the customer with all concerned schemes.

=> After this process, the customer may specify some additional requirements and depend on that some additional packages should be verified and conveyed to the customer.

=> Agile/Iterative frameworks can be very much suitable for this case. This improves overall customer satisfaction, profits and the quality of products and services.

Question 4

List out the possible features those are not feasible to consider. Can you provide justification for each of them in detail?

The consolidated packages generated by the system will not be the best meaning the policy makers may not agree with it; because it is possible that the policy makers might have some unique idea which can attract customers.

The customers might not receive feedback instantly about the package created by him; it can take some amount of days because the policymakers need to analyze everything then accordingly decide.

The customer have to use the insurance policies available so here the customer is restricted to using the available insurance policies.

Question 5

Let us assume that the customized package developed by the customer (using your second product) is similar to the package available in your pre-defined package. What is the possible reason behind this defect? How can it be ensured that this would not

happen? In which requirements engineering activity, this defect can be handled?
Please provide a scenario to justify.

-->There can be more than one reasons for the customized package being similar to the predefined package:

1) The pre-defined package is more focused on the financial capacities of the customer and other customization so it would not get any senseful benefits to the customer . so this feature will fail in this type of scenario.

2) There is a possibility that there are so many packages and searching is not user friendly to customers. In this case customers avoid to search and customize their own package so here also this feature gets fail.

3) One possibility is the analysis of the system can be poor so the result will not provide satisfaction to the customers and will not interest them.

-->One solution is we can give them filter option by which they want to focus eg. if the customer focuses on financial perspective or long or short time perspective etc. so this should be useful to the customer to find the best package of what they want.

-->One solution is that we can provide users with different types of short term or long term benefits which would interest our customers to choose and customize their package

Question 6

Identify three different use cases where the conflicts between the requirements occur?
Do you think that the conflicts can be resolved? How?

- Developers will provide policies that will compete with other insurance companies. But when other companies will change policies and give better policies than us, then we have to change our policy. And for that we have to make new policy according to that.
- The customer can create his/her own package and send a request for the review and the system will suggest the price. It will be a conflict if the user will choose the needed features from basic packages but he/she doesn't want all functionality of all packages then the price will be high according to users. And for that should have the correct price for use based packages.

- When a user chooses a policy then the system should give a quick response whether he is authentic to get that policy or not. For that system must be reviewed quickly otherwise users will leave the idea of choosing a policy for our company.

Question 7

Considering the set of features you have identified, what are the non-functional aspects associated with this system? Explain rationale behind the selection of each of them.

- Non-functional requirement
- authentication
- Scalability
- Availability
- Security
- maintainability

Question 8

Can there be 'Open Issues'- issues those are identified but not taken care of? If yes, what are they? Is there some alternative ways for their resolution, such that no requirements conflict will happen?

Open Issues

- In this system, it will not give any physical receipt to the recipient for their policies. The solution to this is the user can print a virtual copy of the policy receipt.
- One of the requirements is that users can use its insurance policies in government as well as private organizations. Which can be done by the collaboration will the organization or system allow different organizations to add them in the system and specify requirements to use policies in that organization.