Group-24

Software Engineering Case Based Learning Exercise

201801089 DIPANKAR SUGAT NIKESH
201801084 MAKWANA KETULKUMAR LALITKUMAR
201801122 PRAJAPATI SMIT AMRUTKUMAR
201801044 AGRAWAL MOHIT PANKAJBHAI
201801181 PATEL HIMANSHUKUMAR PARESHKUMAR
201801215 PADHIAR ADITYA ROHIT
201801148 PATEL UTSAV JAYESHBHAI
201801199 PARMAR KRUTIKKUMAR MAHESHBHAI
201801004 RATANPARA MAHIR YOGESHBHAI
201801029 MODI HARSH PARAG

Deepti Ameta (DAIICT), Ashish Sureka (Ashoka) Paramvir Singh (NITJ), Saurabh Tiwari (DAIICT)

Objective: To facilitate the concepts of understanding the problem domain, requirement elicitation and prioritization through real world cases.

Topic covered in the class to undertake the study: Requirement Elicitation Techniques, Requirement Analysis, Requirement Prioritization Techniques, Concept Mapping, Use cases and user stories.

LIC Market-Driven System

LIC, an insurance company wants to digitize a range of business processes and provide a complete solution that addresses all aspects of the agent-insurer relationship. Consider yourself as a part of the Requirement Analyst team at Retinodes Software Company, and your job is to gather and prioritize the set of requirements. In this new requirement of the project, there are no existing systems that can be analyzed for the development. Requirements have to be gathered, negotiated, validated and prioritized through multiple stakeholders which is a complex process because all stakeholders have different perspectives, requirements and priorities. Therefore, Retinodes want to have a requirements engineering framework that can be used in market-facing projects. To start with, you need to identify the set of stakeholders associated with the system, the domain information about the insurance market, and possible features. The first product LIC wanted you to develop consolidated insurance packages which can compete with the packages provided by other insurance companies. Another product is based on the customer priority, based on the insurance policies available the customer can create his/her own package and send a request for the review. The system has to automatically analyze the package, provide suggestions (if any), and at last give a competing price for the package. To understand the problem domain, existing packages have to be analyzed and the demands and restrictions from the insurance policy and agents have to be understood completely. The requirements and feasibility report generated by you, will be further used by the development team for implementation.

Questions:

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.

ANS:

Stakeholders: owners, managers and employees of LIC, agents, private and organizational clients, banks, outsourcing companies, market competitors, insurance organizations, members of the Insurance community.

Users: private and organizational clients, managers and employees of LIC, outsourcing companies, members of the Insurance community,

Private and organizational clients:

- As a client, I want to create my custom policy packages according to my priority and needs, so that I can buy the best insurance policy suitable for my needs.
- As a client, I want to create an account so that I can search for policies based on my needs
- As a client, I want to see all the available policies so that I can select one according to my preference.

Managers and employees of LIC :

- As a manager and employee, I want to create consolidated insurance packages, so that it can compete with the package provided by other insurance companies.
- As a manager, I want to see details of the policy-holders under my assistance so that I can provide further assistance to them and contact them for future policies.

Outsourcing companies:

- As an outsourcing company, I want a solution so that I can digitize my insurance process, so that I can increase the reach of the policies of my company.
- As an outsourcing company, I want to suggest new policies, so that I can increase my profits.

Members of the Insurance community :

- As a member of the insurance community, I want to analyse the package and provide suggestions, so that the customers can get feedback while selecting the insurance package.
- As a policy holder, I want to pay for my periodic premium via digital payment so that I can pay that easily.

We will use MoSCoW technique to prioritize the requirements

Priority:

1) MUST (mandatory):
    a) As a client, I want to create an account so that I can search for policies based on my needs
    b) As a client, I want to see all the available policies so that I can select one according to my preference.
    c) As a manager and employee, I want to create consolidated insurance packages, so that it can compete with the package provided by other insurance companies.
    d) As an outsourcing company, I want a solution so that I can digitize my insurance process, so that I can increase the reach of the policies of my company.

e) As a policy holder, I want to pay for my periodic premium via digital payment so that I can pay that easily
f)

2) SHOULD (of high priority)
    a) As a client, I want to create my custom policy packages according to my priority and needs, so that I can buy the best insurance policy suitable for my needs
    b) As an outsourcing company, I want to suggest new policies, so that I can increase my profits.
    c) As a member of the insurance community, I want to analyse the package and provide suggestions, so that the customers can get feedback while selecting the insurance package
3) COULD (preferred but not immediately needed)
    a) As a manager, I want to see details of the policy-holders under my assistance so that I can provide further assistance to them and contact them for future policies.
4) WOULD (can be postponed for further details)

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?

ANS: The market facing technologies will be used to interact directly with our customer. Following is the list of market facing technologies that are useful for promoting our application :-

1. Email newsletters
2. Social-Media Marketing
3. TV advertisement
4. Referral Programs
5. Press releases
6. Customer Video Testimonials

The application will have a user-friendly interface so that the users can through the application easily and get all the important policy related information on their fingertips. These market facing technologies will create a good first impression of our product and the early adopters will serve as word of mouth for our product.

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.

Ans: Since there are no existing products that can be analyzed for the development of our solution, we have to make our product from square 1. We also need to satisfy the requirements and needs of multiple stakeholders and users and prioritize them accordingly. Keeping this in mind we should use an agile methodology(scrum process model) with use of user stories. We can divide the backlogs into

sprints and keep adding the features and releasing versions incrementally. By this way the customer involvement will also be maintained.

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

-Cancellation:If a customer wants to cancel or modify his/her policy it is not feasible for the system to do it efficiently cause it requires human review and approval which can not be relied on AI.

-Claim: It is not feasible to claim your insurance online. The customer will have to get in touch with the customer care representative.

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.

ANS:- one of the main reason behind the customised package similar to the predefined package is availability of options provided to the customer which are having a meagre difference from the predefined packages so to ensure this doesn't happen we have to give a range of options to the customer to hand craft its policy. To overcome this defect there should be a well defined list of requirements from the customer's point of view. In the elicitation phase engaging with the customers to properly understand their requirements is crucial. For example, if a home insurance covers things like fire, theft, vandalism along with protection of valuables like furniture, appliances etc. Now, if the customer wants to customize this policy in such a way that he/she doesn't want protection of valuables and there is no option for that then that'd lead to the above mentioned defect.

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

- Packages can be created by both manager and outsourcing companies so there is a chance of occurring a conflict in the pricing for packages of the same value.
- Policy which can cause loss to the company must be notified and to be removed after a manual approval.

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.

ANS:

- Security: Privacy of the user information is necessary because users may not want to convey what all insurance policies he is undertaking and his funds and data should be safe.
- Reliability: Should function smoothly throughout the insurance registration and renewal process as well as during the payment processes.
- Performance: Application should run smoothly with very less response time.
- Reusability: customer can update his package multiple times by changing requirements.

- Operating constraint : internet connection is a necessity.
- Interface constraint: UI/UX should be very minimal/unhindered as the main objective should be to easily make packages and choose between various packages.
- Flexibility: The website should also be responsive to run on mobile devices.

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

- User verification is not decided yet. What we could do is ask users to upload their documents and do a manual verification in 1-2 working days.
- Dealing with the users who are creating vague packages and sending them for review and creating traffic in the system. Limit the time interval between submission of another package after issuing the first one.

Additional Question:
How do the requirements of the similar systems (other similar applications) match with the system under study here?