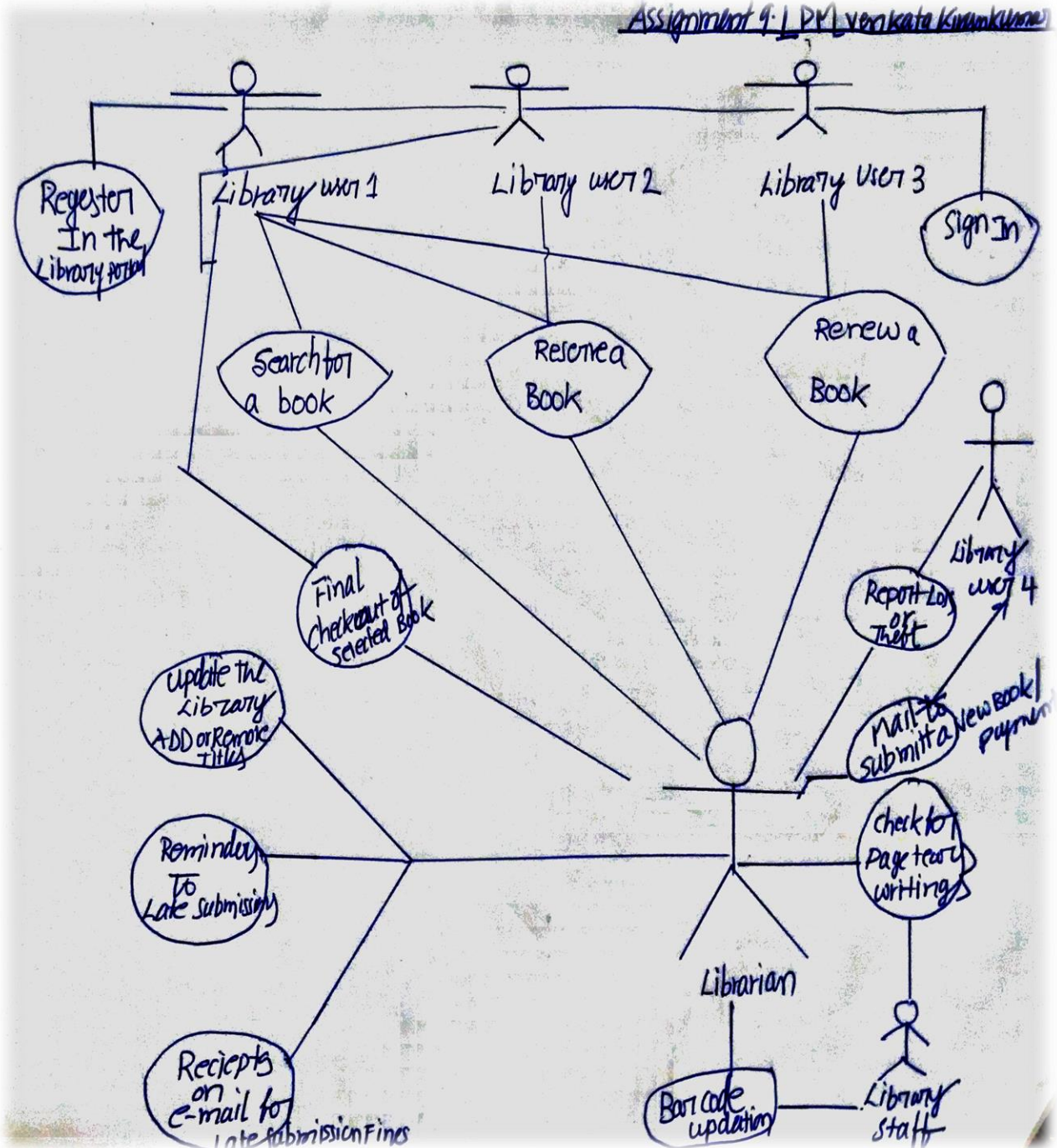


1. Draw a Use Case Diagram for an online Library Management System



2.List down the best practices from Agile/Scrum methodology

- Agile/Scrum method uses earned business value to determine customer satisfaction and project success
- Working in sprints is one of the best practices of agile or scrum
- Theoretically Scrum/Agile estimates and plans according to 6hour productivity instead of traditional 8hour per day approach
- Teams are self organizing so high level of involvement will be there
- Uses Collaborative approach instead of Individual approach.Eg Collaborative practice: 'Pair Programing' is encouraged
- Daily scrum timing and location are fixed which is of short duration also called as daily standup meetings
- User stories are written and the actual number of user stories contributing to business value or also calculated
- Product backlogs are maintained by a specific role Product Owner which is not followed in traditional approaches of project management
- Customer collaboration is more in Agile/Scrum
- Iterative approach ,Continuous Integration and Automated testing are used and agile and scrum
- Projects are timeboxed and burndown charts are plotted which shows work remaining in the sprints

3.Collaboration

a.How does collaboration help agile development?

- Agile works with on Co-location of employees and Collaboration is like pillar of Agile
- Collaborative approach reduces time and makes the work faster and error free
- Two of the four values in *the Agile Manifesto* highlight the emphasis Agile methodologies place on strong collaboration. "*Individuals and interactions* over processes and tools" conveys the need of communication and how it improves working on a project
- Eg1: Rather than testers and developers using a internet based defect tracking tool to record bugs, they are encouraged to sit and work together to recreate and resolve issues.
- Eg2:If B.A and Development team are in the same office the work will be faster

b.What if the team is distributed and can you achieve the same productivity?

- Its difficult to achieve same amount of productivity especially in agile when the team is distributed
- As mentioned I above in the question 3.a (a. How does collaboration help agile development?) Agile believes in collaboration which is not possible when the team is distributed

c.What would you do to achieve the productivity for a distributed team?

- Co-location is the best solution if the team is distributed to achieve the productivity
- However in certain circumstances colocation is not possible-in the scenario de-agile of some less important aspects or functions of a project is practiced
- De-agile projects and Distributed projects should focus on differences in time zones and work culture differences to achieve the productivity as desired or at least to improve the productivity
- Scrum master should take extra care if one or few persons in the team is not co located.he should facilitate for better communication ultimately for smooth running and productivity of the project

4.What is Sprint Zero in Agile? Describe the activities that are done in Sprint Zero.

- Sprint zero is like a pre-preparation before starting an agile project
- Its like defining a skeleton or framework which defines how to do the sprints(from Sprint1 to end of sprints)and background or a base to run a project is created

Some of the activities done in sprint zero are:

- Defining how a product backlog should be
- Defining how the product code should be written
- Setting up Infrastructure like servers
- Briefly defining how each sprint should be
- Activities which are discussed in sprint retrospective and business deliverables are also discussed in the sprint zero