PM Assignment #2

Group 1, 02/11/2024

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Recommended Due Date: 02/13/2024

Last Call Due Date: 04/17/2024



\_Flint Campus\_

[CSC-580]: Advanced Software Engineering

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# CSC-580 PM CASE: THIRD AVENUE SOFTWARE HEALTH-CARE APP PROJECT

This case is new for the ninth edition of Information Technology Project Management. The case provides an opportunity to apply agile and Scrum principles to project management.

Each part of the case contains several task assignments to help you explore the use of agile and Scrum principles.

## Part 2: Project Scope Management

As one of the two senior programmers at Third Avenue, you have been selected to run the project for developing the health-care app. You will be joined by the following colleagues on the project team:

• Eric, a junior programmer who is considered by his peers to be the author of some of the best code at the company. You have also designated Eric to be the project ScrumMaster.

• Lia, another talented young programmer

• Brianna, a marketing representative who has experience in health care from a previous job.

• Jack, the regulatory manager at Third Avenue

• Kendra, the Quality Assurance manager

Remember that project scope management is different in agile projects than in traditional project management. For example, participants in agile projects typically spend less time defining scope in early stages of a project. However, Third Avenue has high hopes for the health-care app and wants to make sure that all team members work out some basic, crucial requirements before proceeding. Also, agile projects generally require more iterations of working software than in traditional project management, so management must be willing to trust the process once the basic requirements are in place and understood.

To help develop scope, agile and Scrum approaches employ cards, user stories, and technical stories. User stories are often written on index cards and then arrayed on a wall or tabletop to help the agile team plan how to implement the ideas into the product. Technical stories are then developed from the user stories. Technical stories can contain one or more technical tasks that developers use to chart progress on a sprint board as work is conducted throughout a sprint. This approach facilitates group discussion, which often leads to a much better set of product specifications than the rather simple ideas expressed on the cards.

One of management’s key goals is to have the team develop ideas for completing a minimum viable product (MVP) as soon as possible. An MVP is a streamlined, stripped-down version of a product that can still be released for real-world use and review. It contains a subset of features that will be included in the final version. An MVP must possess several key properties:

• It has sufficient usable features and value that users will buy it.

• These early users will see the potential benefits of the product and trust that it will only improve in later iterations.

• It provides a feedback loop that will help programmers improve the existing features and add new features with minimal delays.

Remember that the overall budget for the project is $350,000, and Third Avenue management would like to see a finished application available in four months. The MVP version, of course, must be available much more quickly—management wants it to be ready to ship in six weeks. The project team has decided that sprints will be done every two weeks, so the MVP version must be ready to ship for use and review after three sprint cycles. The budget for completing the MVP is $120,000.

### Instructions

• Open a new Microsoft® Word document and complete the Tasks below.

• Save the file on your computer with your last name in the file name. (Example: part 1 tasks\_Jones.doc)

• Click the Choose File button to select and upload your saved document.

# Task 1

## Task Definition

Based on what you have learned in Part 2, complete the project charter you began in Part 1.

## Task Solution (not done)

Project Charter

12/11/2023

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Title**: THIRD AVENUE SOFTWARE HEALTH-CARE APP | | | |
| **Project Start Date: 12/17/2023 Projected Finish Date:** 4/17/2024 | | | |
| **Budget Information: $350,000 ($120,000 of the $350,000 for a MVP)** | | | |
| **Project Manager:** Eric, 313-192-2424, eric@3rdAve.com | | | |
| **Project Objectives:**  Develop a comprehensive health-care app that serves as a "one-stop shop" for all our customers' health-related needs. The app will implement a range of features tailored to enhance user experience, including fitness tracking, medication management, emergency contacts, and payment tracking. The design will ensure usability for users of all ages, including older individuals, incorporating accessible text display options and striking a balance between privacy and emergency information sharing. Our platform will facilitate seamless communication between healthcare providers and patients, integrating a secure messaging system for real-time interaction. Personalized health recommendations will be provided based on user data and medical history, empowering individuals to make informed decisions about their health. Telemedicine capabilities will accommodate remote consultations and medical appointments, ensuring accessibility to healthcare services regardless of location. Central to our design philosophy is the implementation of a user-friendly interface with intuitive navigation, prioritizing ease of use and enhancing overall user experience. Keeping an agile framework, a minimum viable product (MVP) should be delivered as a first iteration of the application. This MVP is targeted to be available in 6 weeks from the project start date and completed for under $120,000. | | | |
| **Success Criteria:**   * Successful launch of a fully functional health-care app. * Positive feedback from target users regarding usability and functionality. * Stay within the allocated budget and meet the project timeline. * Ensure compliance with healthcare regulations and data privacy laws. * Achieve a high adoption rate among target users within the first three months of launch. * MVP is delivered within 6-weeks from project start date. * MVP is developed for under $120,000. * Project is completed within 4-months from its start date. * Project is developed for under $350,000. | | | |
| **Approach:**   * Utilize agile principles, specifically Scrum methodology, for rapid and iterative development. * Conduct regular sprint planning, review, and retrospective meetings to ensure continuous improvement (sprints are to be 2-weeks long). * Prioritize features based on customer needs and feedback.   + Select features based on a quick role out of the MVP. * Collaborate closely with stakeholders to address concerns and incorporate changes throughout the development process. * Implement rigorous testing procedures to ensure the app's reliability, security, and performance. * Provide comprehensive user training and support resources to facilitate seamless adoption of the app. * Establish a feedback mechanism to gather user input and identify areas for future enhancement and optimization. | | | |
| **Roles and Responsibilities** | | | |
| ***Name and Signature*** | ***Role*** | ***Position*** | ***Contact Information*** |
| You | Product Owner | Senior Programmer | You@3rdAve.com |
| Eric | SCRUM Master (Project Manager) | Junior Programmer | Eric@3rdAve.com |
| Lia | Team Member | Programmer | Lia@3rdAve.com |
| Brianna | Team – Market Advisor | Marketing Representative | Brianna@3rdAve.com |
| Kendara | Team – Quality Advisor | Quality Assurance manager | Kendra@3rdAve.com |
| Jack | Team – Regulation Advisor | Regulatory manager | Jack@3rdAve.com |
| **Comments:** (Handwritten or typed comments from above stakeholders, if applicable)  You: It is critical that we have our MVP delivered within 6-weeks of the project start date for under $120,000. Based on the delivery, we will decide whether to continue or terminate this project. | | | |

# Task 2 (Mike)

## Task Definition

Part 1 of this case listed the key features needed for the app. The list is quickly summarized here:

• A fitness tracker for recording health information, such as blood pressure and cholesterol

• A medication tracker (electronic pillbox) with a calendar and alarm notifications

• An electronic address book for recording contact data of doctors and other health-care professionals

• An emergencies list for storing vital phone numbers and addresses to provide quick access to hospitals, urgent care clinics, children, and friends in an emergency. List entries will trigger interactive GPS mapping software to help locate hospitals and other health-care venues.

• An emergency information list in which customers store important data about themselves in case it is needed in an emergency.

• A resources feature that lists links to other popular online health sites, such as WebMD

• A payment feature that tracks health expenses and allows customers to make related payments through their phones.

• Usability issues

Using this feature list, develop a set of cards, user stories, and technical stories to describe the software requirements for the health-care app. Remember from your course readings that user stories describe what users need to do to execute a task or perform a job function, focusing on the “who,” “what,” and “why” of a requirement in a simple, concise way.

## Task Solution (not done)

#### (CRC) Cards? What kind of cards...

|  |  |  |
| --- | --- | --- |
| Title 1: Health Tracker | Priority: High | Estimate: Middle |
| User Story: As a customer, I want to track my health information like blood pressure and cholesterol levels within the app, so I can easily track my fitness over time. | | |
| Acceptance Criteria: Each user story should be fully implemented and tested.  User interface should be intuitive and user-friendly.  Data storage and retrieval should be secure and efficient.  Payment transactions should be secure and reliable. | | |

|  |  |  |
| --- | --- | --- |
| Title 2: Electronic Pillbox | Priority: High | Estimate: Low |
| User Story: As a user, I want an electronic pillbox feature with a calendar and alarm notifications to help me remember to take my medications on time. | | |
| Acceptance Criteria: Each user story should be fully implemented and tested.  User interface should be intuitive and user-friendly.  Data storage and retrieval should be secure and efficient.  Payment transactions should be secure and reliable. | | |

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| --- | --- | --- |
| Title 3: Electronic Address Book | Priority: Low | Estimate: Low |
| User Story: As a user, I want an electronic address book to store contact information for my doctors and healthcare professionals, making it easy to reach out to them when needed. | | |
| Acceptance Criteria: Each user story should be fully implemented and tested.  User interface should be intuitive and user-friendly.  Data storage and retrieval should be secure and efficient.  Payment transactions should be secure and reliable. | | |

|  |  |  |
| --- | --- | --- |
| Title 4: ICE -Emergency Contacts | Priority: High | Estimate: High |
| User Story: As a user, I want an emergencies list stored in my app where I can store vital phone numbers and addresses for hospitals, urgent care clinics, and friends, enabling quick access in an emergency. Additionally, I want the ability to trigger GPS mapping software to locate these venues. | | |
| Acceptance Criteria: Each user story should be fully implemented and tested.  User interface should be intuitive and user-friendly.  Data storage and retrieval should be secure and efficient.  Payment transactions should be secure and reliable. | | |

|  |  |  |
| --- | --- | --- |
| Title 5: **ICE – Personal Data** | Priority: Middle | Estimate: Middle |
| User Story: As a user, I want an emergency information list where I can store important personal data that might be needed in case of an emergency, ensuring quick access for medical personnel. | | |
| Acceptance Criteria: Each user story should be fully implemented and tested.  User interface should be intuitive and user-friendly.  Data storage and retrieval should be secure and efficient.  Payment transactions should be secure and reliable. | | |

|  |  |  |
| --- | --- | --- |
| Title 6: Health Resources | Priority: Low | Estimate: Low |
| User Story: As a user, I want a resources feature that provides links to popular online health sites like WebMD, so I can access additional health-related information and resources conveniently. | | |
| Acceptance Criteria: Each user story should be fully implemented and tested.  User interface should be intuitive and user-friendly.  Data storage and retrieval should be secure and efficient.  Payment transactions should be secure and reliable. | | |

|  |  |  |
| --- | --- | --- |
| Title 7: Health Expenses Wallet | Priority: Middle | Estimate: High |
| User Story: As a user, I want a payment feature that tracks my health expenses and allows me to make related payments through my phone, providing a seamless experience for managing healthcare finances. | | |
| Acceptance Criteria: Each user story should be fully implemented and tested.  User interface should be intuitive and user-friendly.  Data storage and retrieval should be secure and efficient.  Payment transactions should be secure and reliable. | | |

#### User Stories

User Story 1:

As a customer, I want to track my health information like blood pressure and cholesterol levels within the app, so I can easily track my fitness over time.

User Story 2:

As a user, I want an electronic pillbox feature with a calendar and alarm notifications to help me remember to take my medications on time.

User Story 3:

As a user, I want an electronic address book to store contact information for my doctors and healthcare professionals, making it easy to reach out to them when needed.

User Story 4:

As a user, I want an emergencies list stored in my app where I can store vital phone numbers and addresses for hospitals, urgent care clinics, and friends, enabling quick access in an emergency. Additionally, I want the ability to trigger GPS mapping software to locate these venues.

User Story 5:  
  
As a user, I want an emergency information list where I can store important personal data that might be needed in case of an emergency, ensuring quick access for medical personnel.

User Story 6:  
As a user, I want a resources feature that provides links to popular online health sites like WebMD, so I can access additional health-related information and resources conveniently.

User Story 7:

As a user, I want a payment feature that tracks my health expenses and allows me to make related payments through my phone, providing a unified experience for managing healthcare finances.

#### Technical Stories

Technical Story 1:   
Develop a database schema to store user health information securely within the app.

Technical Story 2:   
Implement a calendar and alarm system within the app to manage medication schedules and send timely reminders to users.

Technical Story 3:   
Design a database structure to store contact information for doctors and healthcare professionals, ensuring easy retrieval and updating of information.

Technical Story 4:   
Integrate GPS mapping software into the emergencies list feature to provide accurate directions to hospitals and urgent care clinics based on user location.

Technical Story 5:   
Implement secure storage and retrieval mechanisms for storing users' emergency information within the app.

Technical Story 6:   
Develop a module to fetch and display links to popular online health sites, ensuring seamless access to additional health resources.  
  
Technical Story 7:  
Integrate payment gateway APIs to facilitate secure transactions for tracking health expenses and making payments through the app.

# Task 3 (Tom)

## Task Definition

The “Collecting Requirements” section of Module 5 discusses several methods for gathering requirements, including questionnaires, surveys, stakeholder interviews, prototyping, and context diagrams. Based on your knowledge of agile and Scrum, which of these methods should the Third Avenue team use to collect requirements for the project? Write a two-paragraph response to defend your answer.

## Task Solution (not done)

# Task 4 (Cason)

## Task Definition

Develop an initial scope statement. Make sure to follow the detailed process shown in Module 5. Recall that a good scope statement requires some of the items shown in the following table.

|  |
| --- |
| **Components of a scope statement** |
| Information from the project charter |
| Product scope description |
| Functional and design specifications for developing software |
| Product user acceptance criteria |
| Detailed information for project deliverables |
| Project boundaries, constraints, and assumptions |
| References to supporting documents, such as product specifications or corporate policies |

## Task Solution (not done)

Scope Statement (Version xx)

|  |
| --- |
| **Project Title:**  **Date:**  **Prepared by:** |
| **Project Justification:**    . |
| **Product Characteristics and Requirements:** |
| **Product User Acceptance Criteria:**      **Summary of Project Deliverables**  **Project management-related deliverables:** business case, charter, team contract, scope statement, WBS, schedule, cost baseline, status reports, final project presentation, final project report, lessons-learned report, and any other documents required to manage the project.  **Product-related deliverables:** research reports, design documents, software code, hardware, etc. |

# Task Wrap-up

## Task Definition

Based on your work in developing the software requirements and scope statement, develop a list of features that will become the MVP for the first iteration of the health-care app. For example, the programmers’ initial ideas for the app include (a) an electronic address book for recording contact data of doctors and other health-care professionals; and (b) an emergencies list for storing vital phone numbers and addresses of hospitals and other emergency venues. Should these two items be combined in the MVP version? Consider such issues as you develop your list.

## Task Solution

# Group Member Contributions

## Cason Konzer

* HW Preparation / Template Creation.
* Task 4.

## Tom Green

* Task 3.

## Mike Turley

* Task 2.

## ALL

* Task 1
* Task Wrap Up
* Discussed Answers and Distributed Work. Made suggestions to improve each other's work as applicable.

# Works Cited

Schwalbe, K. (2019). *Information Technology Project Management* (9th ed.). Course Technology, Cengage Learning.