

Project Specification & Sprint Plan 1

CS2001 - Group 50

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Project Specification

Product vision

Since poverty is still a prevalent problem in society, a number of new problems emerged recently. Technology plays an ever greater role in modern schools, colleges, and universities, which imposes new barriers to education for students from low-income backgrounds, which limits their capacity to receive a quality education. When money for rent and food are a concern, buying a laptop for school might be low in the list of priorities, to the detriment of the student. We aim to create a platform named “TechDon” that addresses this problem by helping willing individuals and organizations donate their old technological items to students who need them.

Currently, there are no simple solutions which facilitate the donation of technological items to students, thus making selling or discarding of devices the simplest option, even if the prior owners would have preferred to donate them. This is why we aim to minimize friction for our users and aim to simplify the process by facilitating it on a unified platform with a focus on minimal user involvement. Individuals and organizations will be able to quickly list their devices for donation. Students will be able to select the devices they need (e.g. laptops, hard drives, monitors, etc.) and will then be informed upon availability. To reduce fraud, necessary identification will be performed on donation recipients, while maximizing the efficacy without being overly complex or invasive.

The motivation behind this project is to advance the progress of two UN sustainability goals: *Quality Education* and *Reduced Inequalities*, by removing barriers to receiving education imposed by modern institutions and simultaneously promoting social mobility, to let students have equal opportunities of success regardless of their economic background.

Product Backlog

An initial product backlog was drafted that greatly exceeds the level of functionality that can be implemented for the minimum viable product (MVP). Yet, the backlog is not complete and will continue to adapt during the subsequent sprints, as requirements and scope become more clear.

1. As a user, I need to be able to access the website, to interact with it. (Functional)
2. As a user, I have to create an account with TechDon, so I can access the platform's functionality. (Functional)
3. As a donor, I need to be able to list devices for donation, so students in need can receive them. (Functional)
4. As a student, I need to be able to select which devices I need, so I can be informed once any are available. (Functional)
5. As a student, I need to be informed when a device is available, so I can claim it. (Functional)
6. As a donor, I need to be able to communicate with students who receive my device, so we can coordinate the delivery or collection. (Functional)
7. As a user I need to be able to access all required functionality from the website, to be able to complete the tasks efficiently. (UI / Functional)
8. As a user, I need my personal information to be secure, so I can entrust it to the website. (Non-functional, security)
9. As a user, I need the website to be fast and have maximal uptime, to be able to access it whenever I want. (Non-functional, reliability)
10. As a user, the website needs to have a logically organized interface, so using it is not a hassle. (UI)
11. As a user, the website needs to be intuitive and easily navigable, so I can quickly find the functionality I'm looking for. (UI)
12. As a user, I need the website to be responsive and accessible from mobile devices, so I can access it whenever I want. (UI)
13. As an admin, there needs to be an admin panel, so website management and analytics tasks can be performed easily. (Functional)
14. As a donor, I want recipients to have their identity and eligibility verified, to assure the right people are receiving the donation. (Functional)
15. As a student, I need to be able to see an estimate of how long it will take for me to get a device, to have an understanding of the progress. (Functional)
16. As a donor, I want students to be able to only receive one device, to make sure my devices go to people who need them. (Functional)

Sprint Plan 1

The goal of the first sprint is to create a MVP that provides nothing but the most rudimentary functionality, but still results in a working product by the end of it. This is the motivation behind choosing the user stories that we chose, and setting the acceptance criteria the way we set it. The acceptance criteria for this sprint should be understood as that for the MVP and not as the acceptance criteria for our platform as a whole.

For the first sprint the responsibilities of Scrum Master and Product Owner have been given to Philipp and Nusrat respectively.

The backlog items to be completed during the first sprint are as follows:

#	User Story	Priority	Points
1	<i>As a user, I need to be able to access the website, to interact with it</i>	Very High	17
Acceptance criteria : <ul style="list-style-type: none">• The basic website needs to load and present the user with rudimentary information• Provide forms that hook into the endpoints of the back-end			
Tasks		Responsible	Points
Plan and create wireframes of what the website will look like		Ahmed	4
Implement the basic design in HTML and CSS		Ahmed	8
Set up the back-end that serves the webpages		Philipp	1
Connect the backend REST endpoints to the webpage via JS		Philipp	4

#	User Story	Priority	Points
2	<i>As a user, I have to create an account with TechDon, so I can access the platform's functionality</i>	Very High	23
Acceptance criteria : <ul style="list-style-type: none"> Have an account system that support registration, login, and persistent storage of user-related information Let the account functionality be externally accessible via an API endpoint 			
Tasks		Responsible	Points
Integrate a database (DB) into the backend for persistent data storage		Philipp	1
Create an interface for the DB, to streamline the process of reading / writing information		Philipp	6
Create internal capabilities that allow accounts to be created, logged into, and modified		Alek	12
Implement the API Endpoint that allows external interaction with the login system		Alek / Thoy	4

#	User Story	Priority	Points
3	<i>As a donor, I need to be able to list devices for donation, so students in need can receive them</i>	Very High	6
Acceptance criteria : <ul style="list-style-type: none"> Have a website that allows donors to fill out information about their devices that add them to the user's persistent data 			
Tasks		Responsible	Points
Create a frontend form where devices can be described		Nusrat	2
Implement the endpoint that allows devices to be added		Nusrat/Thoy	3
Integrate the data into the DB via the interface		Nusrat	3

#	User Story	Priority	Points
4	<i>As a student, I need to be able to select which devices I need, so I can be informed once any are available</i>	Very High	6
Acceptance criteria : <ul style="list-style-type: none"> Have a website form that permits selection of device categories listed in our system and adds selected devices to the user's persistent memory 			
Tasks		Responsible	Points
Create a website that allows the selection of offered device categories (e.g. laptop, monitor, etc.)		Nusrat	2
Implement an endpoint that allows the devices to be selected		Nusrat/Thoy	2
Integrate the data into the user's persistent memory		Nusrat	2

#	User Story	Priority	Points
5	<i>As a student, I need to be informed when a device is available, so I can claim it</i>	High	18
Acceptance criteria : <ul style="list-style-type: none"> Have a working system that decides the recipients of the devices Inform recipients upon selection by Email 			
Tasks		Responsible	Points
Create a rudimentary queue system that allots devices to users in the order they queued up for them		Philipp	3
Create an internal endpoint for email capabilities and integrate it with an SMTP server		Nawal	6
Create an email form with HTML / CSS that gets send to users		Ahmed	2
Send an email to users upon being selected		Nawal	1
Add a webpage on which users can see the device and claim it		Ahmed	2
Create an endpoint view offered devices		Thoy	2
Create an endpoint to claim offered devices		Thoy	2

#	User Story	Priority	Points
6	<i>As a donor, I need to be able to communicate with students who receive my device, so we can coordinate the delivery or collection</i>	Medium	2
Preliminary Acceptance criteria : <ul style="list-style-type: none"> Send both the donor and the recipient the contact details of the other party, so they can get in touch (<i>will be expanded in later sprints</i>) 			
Tasks		Responsible	Points
Send emails containing contact email addresses and phone numbers of the donor and recipient to each other		Nawal	2