Android Mobile App Development

App name: **E-Harvester**

Speculate phase

Team Members	
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<div align="center">**E-HARVEST MOBILE APP**</div>

Introduction

The goal of this assignment is to plan our iteration one and prioritize tasks and features based on various criteria such as how important features are, how time-consuming they are, and workload, while also focusing on features in Minimum Viable Product (MVP). We plan to use planning poker as a team to assign a point to the feature story, with each member looking at it and assigning a number between 1 and 27. Planning poker uses the Fibonacci series number, which means that the number will be between 1 and 27 but will abide by the Fibonacci logic. Once every team member assigns a number to a feature, we will pick one number to give the feature based on the number picked by the majority of the team and after assigning value points to a feature, the team will refer to them and assign hours to the feature it can take based on it a value point.

Features & Tasks

The completion of several features, as well as all tasks or sub-features associated with each feature, will be required for the development of the E-Harvester app. Some of the features are in the Minimum Viable Product (MVP), while others are not. Due to the time constraints, the team will work as hard as they can to complete the MVP first, and if the schedule allows, they will work on other features based on how prioritized the features and tasks are.

E - Harvester Features		
Feature	**Sub-Feature(tasks)**	**Description**
Authentication	Account Creation	In this feature customers will be able to create their accounts, the admin will be able to register quality assurance users and the quality assurance user will register farmers in the system
	Login	Using the username/email and password, the customer, farmer, quality assurance, and admin will be able to log in to the App.
	Resetting password	All users will have the privilege of changing their password when they are already logged in.

	Logout	Users will be able to log out from their accounts after performing different activities.
	Forget Password	In case users forget their passwords, they will be able to reset new ones.
Store Management	Adding Product	Farmers will be to add new products to the store and Quality Assurance users will approve the newly added product to be visible to the customers.
	Updating Product	Farmers will be able to update product information and these changes will be visible to customers with the approval of Quality Assurance users.
	Deleting Product	Farmers will be able to delete products from the system with Quality Assurance approval.
Product Search		With the help of various filter options, the customers will be able to search for different products of their interests.
Shopping Cart	Adding Product on Cart	Customers will be able to add products of their choice to the cart.
	Updating Quantity on Cart	Customers will be able to change the quantity of a product added to the cart.
	Removing Product on Cart	In case a product is no longer needed, Customers will have the privilege of removing it from the cart.
	Checkout	Customers will be able to pay for the products added to the cart.
Payment	Mobile Based Payment (MOMO Pay)	Using external APIs, we will add the MTN Mobile Payment method.
	Card-Based Payment (VISA)	Using external APIs, we will add the VISA Payment method.
Delivery Tracking		Customers will be able to view the status of their product's delivery.

Product Review		Customers will be able to review the product based on the degree of satisfaction.
Contact Us		Customers will be able to contact us by providing constructive suggestions which will enhance our communication with clients.
Changing Language		We plan that we can have users with different language backgrounds, and this will be resolved by adding language change features.
Real-time chatbot		The chatbot to be implemented will instantly be responding to the client's questions regarding the purchasing process.
Customer Analysis	Customer Behavior Analytics	• Understanding customers' behaviors around the products being delivered will help us to improve the quality of the products being sold.
	Customer Segmentation	• Segmenting our customers based on different parameters such as demographics will help us understand their preferences
Wishlist		The wishlist feature will enable customers to create bespoke collections of products they want to purchase and preserve them in their user account for future reference
Notification		Notifying users about different key actions will be an ideal practice.

Feature's work prioritized

This section is much more concerned with how features are more important than others and how these features must be developed before others. The team prioritized the features based on various factors such as whether they are in the MVP, how much effort they required in terms of hours it could take a person to develop that feature, and how important they are. There are three priority levels: high, medium, and low. Most of the features in high priority as you will see will be those in MVP. The following are features and how they are prioritized from high to low priority.

High-priority features with their tasks are listed below, and the majority of them can be found in the MVP in the previous document we submitted.
- Authentication
  - Account creations
  - Login
  - Resetting password & forgot password
  - Logout
- Store management
  - Adding products to the system
  - Updating products description
  - Deleting products from the system
- Product search
  - Search by name
  - Search by price
  - Search by supplier
- Implementing a shopping cart
  - Add product to cart
  - Updating cart
  - Remove the product from the cart
  - Implement checkout process (asking for delivery information)

The team prioritizes these features because they are the most important features of the platform; once they are ready, people can begin to use the platform while the team continues to work on it.

Medium-priority features and their tasks are listed below, and they are features that are an important part of the platform and that the team may consider after completing a high-priority feature**.**
- Integrating the payment system into a platform
  - Mobile-based payment (MOMO pay)
  - Visa card payment
- Product delivery tracking
- Product reviews

- Real-time chatbot
- Product Wishlist

Low-priority features and tasks are listed below, and they are features that are useful to a platform in terms of making it very interactive but not as important in contributing to the platform's goals.
- Changing language on a platform
- Providing some notifications
- Contact us for information
- Creating profiles for suppliers

Features' workload estimation (In hours)

This section explains how the team estimated the workload of the features. You may be wondering how the team estimated the workload for features; this section will explain reader how. The team used planning poker or scrum poker techniques to accomplish this; these techniques are commonly used by agile teams when estimating product backlogs. To begin, each team member assigned value points to tasks ranging from 1 to 27, with value points varying according to Fibonacci logic or rule. Following that, based on the value point each team member assigned to a specific feature, we assign its hours to be developed by referring to that value point assigned to that feature.
- Authentication (**8 points**)
  - Account creations (**3 hours**)
  - Login (**1 hour**)
  - Resetting password & forgot password (**3 hours**)
  - Logout (**1 hour**)
- Store Management (**5 points**)
  - Adding products in the system (**2 hours**)
  - Updating products description (**2 hours**)
  - Deleting products from the system (**1 hour**)
- Product search (**3 points**)
  - Search by name, price, and supplier (**3 hours**)
- Implementing a shopping cart (**8 points**)
  - Add product to cart (**3 hours**)
  - Updating cart ((**1 hour**)
  - Remove product from the cart (**1 hour**)
  - Implement checkout process (asking for delivery information) (**3 hours**)
- Integrating payment system in a platform (**13 points**)
  - Mobile-based payment (MOMO pay) (**6 hours**)
  - Visa card payment (**7 hours**)
- Product delivery tracking (**5 points**)
- Product reviews (**3 points**)
- Real-time chatbot (**5 points**)

- Product Wishlist **(5 points)**
- Changing language on the platform **(3 points)**
- Providing some notifications **(3 points)**
- Contact us for information **(3 points)**
- Creating profiles for suppliers **(8 points)**

The number corresponds to the same number of hours. 3 points correspond to 3 hours, 5 points correspond to **5 hours**, 8 points correspond to **8 hours**, and 13 points correspond to **13 hours**.

Plan for Iteration 1

In this section, we discussed the expected outcomes after this iteration and assigned tasks to different team members.

At the end of this iteration, the following features will be accomplished.

- Authentication feature
- Store management
- Product search implementation

The following table is showing the feature's tasks assigned to every member of the team.

Feature	Team member
Authentication • Account creations (A_1) • Login (A_2) • Resetting password & forgot password (A_3) • Logout (A_4)	• Robert Mugisha Ngabo (A_1, A_2)
	• Bienvenue Murenzi (A_3, A_4)
Store Management • Adding products in the system (SM_1) • Updating products description (SM_2) • Deleting products from the system (SM_3)	• Honore Peter Joy Ndayishimiye (SM_1)
	• Patrick Ishimwe (SM_2, SM_3)
Product Searching • Search by name, price, and supplier (PS_1)	• Honore Peter Joy Ndayishimiye (PS_1)
	• Patrick Ishimwe (PS_1)

Prototype Link

The following link will be showing the Figma designs of the E-Harvester App.

https://www.figma.com/file/5v339EWTMP0qM4Guivurh3/E-HARVESTER?node-id=16%3A797&t=8R65ToAbcrPRiKZJ-1