



**School of Information  
Technology**

**2023 Semester 2**

**IT2861**

**Software Engineering Assignment 1**

**Tutorial Class: IT2861-04**

**Team No: 04**

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## Product Vision

<b>For</b>	Eco-Conscious consumers
<b>Who</b>	Values sustainable and eco-friendly alternatives in their purchasing decisions
Eco-Friendly Product Marketplace	is a user-friendly and visually appealing e-commerce platform that connects conscientious consumers to a curated selection of eco-friendly and sustainable products
<b>That</b>	allows users to browse, discover and purchase a wide range of products that meet high environmental and ethical standards. Users get to make more informed information when making a purchase
<b>Unlike</b>	existing solutions that traditional e-commerce platform that does not provide eco-friendly products and educate consumers about each product's sustainability features through engaging product descriptions
<b>Our Product</b>	connects environmentally conscious consumers with high-quality, eco-friendly products, promoting transparency and education about sustainability features through engaging descriptions and an expanding inventory.

S/N	User Story	Acceptance Criteria	Assigned To	Priority	Story Points
1	As a potential buyer, I want to compare which product is the cheapest/eco-friendly, so that I can make a more informed decision depending on my budgeting or environmental preferences	Given a potential buyer on the website that wants to compare products by a specific criteria, When they access the product comparison feature with a specific criteria Then the system should display a side-by-side comparison, highlighting or sorting the products based on the selected criterion, providing a clear comparison for budgeting or environmental preferences.	Jason <tohhaozhuo@gmail.com>	2	3
2	As a guest new to the website, I want to login with a guest account for conveniences so that I could explore the website without needing to register, experiencing a hassle-free introduction to the platform.	(1) Given a new user on the website, When they attempt to browse the website with a guest account Then the system be able to give the user basic functions such as browsing products and viewing content without any extensive registration steps. (2) Given a guest has session data like cart items/preferences, When the user decides to create a new account, Then all the session data should transfer to the new account for a consistent & seamless experience.	Jason <tohhaozhuo@gmail.com>	3	13
3	As a buyer, I want to be able to contact the seller so that I can ask more about the products and any future restocks, So that, I can communicate with the seller about my inquiries and any problems/defects with my purchased item.	The website must have a user-friendly and private chat to allow the seller and buyer to communicate seamlessly and easily with accurate and secure display of texts.	Jaeleong89@gmail.com <Jaeleong89@gmail.com>	4	20
6	As an environmentally conscious customer, I want to find out how many trees will be planted if I proceed to checkout with the order so that I would feel assured that I would be helping to contribute toward making the environment a better place when I buy products.	The website must 1) display the number of trees that will be planted with each order. ie. Order [#] has helped us plant 3 trees!	Ryan Tan <arrdeetee@outlook.com>	2	2
7	As a customer, I want to adjust the number of an item in my cart so that I can buy the right amount of quantity for a product	Given that, I want to increment the quantity of a product to 2 instead of looking for the product again and adding it, When I click the plus button in the cart Then the number quantity will be live updated and reflect the changes to 2	Yu Ming Toh <tohyuming05@gmail.com>	4	1
8	As an environmentalist, I want to view individual products so that I can see what material the product is made from, where is it from, etc.	1) An option to search for the product by product type 2) System to provide comprehensive details of a specific product that the consumer selected, including material information and ensure transparency about the composition of each product.	Yu Ming Toh <tohyuming05@gmail.com>	3	1
9	As an administrator, I want to update products on the e-commerce platform, so that there is a seamless and efficient experience for staff to manage product inventory.	Given an admin uploads a new Excel sheet with updated inventory information whether that's the details, price or quantity When the upload is successful Then the system must accurately reflect the new product quantities in the system.	Jason <tohhaozhuo@gmail.com>	3	8
10	As a customer who is very organised, I want to receive an email after a successful payment, so that I can keep it in my file for reference in the future.	The website must send a confirmation email to user after receipt of payment. 1)Order Information, Date and Time , Shipping/Billing Address 2) The email must address the user by first name basis ie. Congrats Jonathan! Your order has been confirmed.	Ryan Tan <arrdeetee@outlook.com>	4	2
11	As a customer who've already purchased an item, I want to track my order delivery so as to see how long it takes for them to deliver the product in real time and give me peace of mind and allowing to plan the receipting of the product.	(1) Given a customer tracking an order, When they enter their order number or required details, Then the system should present real-time information on the current status and provide an estimated delivery time. (2) Given a customer tracking an order, When the estimated delivery time is within a specified window, Then the system should send proactive notifications, updating the customer on the approaching delivery and allowing them to plan accordingly.	Jason <tohhaozhuo@gmail.com>	2	8
12	As a teenage consumer, I want to utilize the Visa pay-wave payment method so that I can have a seamless and convenient transaction.	1) An option to use Visa PayWave payment method 2) The payment process to be an almost immediate response, confirming the success of the transaction	Yu Ming Toh <tohyuming05@gmail.com>	4	5
13	As a relatively impatient customer, I want to use different SignIn/Signup methods like my phone number and Social Media Accounts so that I can buy products without much hassle.	The website must have different integrations like Facebook, Google and Mobile Login to allow users to log in or signup for an account. For Apple, option to use Private Relay must be available	Ryan Tan <arrdeetee@outlook.com>	3	5
14	As a frequent customer who has a fear of missing out, I want to easily locate deals or promotion, so that I will always be in the know and never have to worry about missing out on a deal.	(1) Given a customer with an account on the website, When there are new deals or promotions available, Then the notification system should promptly alert the customer, using channels such as email or in-app notifications, ensuring that they are updated on the latest offers and promotions. (2) Given a customer interacting with the website, When they frequently engage with certain types of deals or products, Then the personalization algorithm should analyze their buying patterns and highlight deals that align with their preferences, providing a personalized and relevant experience.	Jason <tohhaozhuo@gmail.com>	2	2
15	As an apprehensive consumer, I want to use AR viewing of the product that I am purchasing so that I can have a look and feel of how the product looks like in reality.	Given a user is accessing the website, When they want to use Augmented Reality (AR) features, Then the website must seamlessly support and integrate Augmented Reality features.  Given a user is exploring a product, When they request a preview, Then the system should provide a realistic preview of the product's appearance using Augmented Reality technology.	Yu Ming Toh <tohyuming05@gmail.com>	2	20
16	As a SysAdmin, I want the website to verify if I am human, so that Customers can use the website without fear of a Denial of Service Attack	The website must use 1) E-Captcha to verify if a user is a bot or human 2) ECaptcha can either be words or images	Ryan Tan <arrdeetee@outlook.com>	3	2
17	As a Seller/User, I want to be able to send pictures or videos of products to a potential buyer So that, I can send proof of authenticity or so that I can show buyers the up-to-date condition of the item if requested.	The website must be able to send pictures, videos or voice recordings in the chat function Or allow seller to send images already in the camera roll / saved pictures	Jaeleong89@gmail.com <Jaeleong89@gmail.com>	3	13
18	As an indecisive consumer, I want to view the recommended products based on my past transaction history and other consumer purchases so that I can discover new and relevant items that align with my preferences and products with promotions.	1) Given a registered user, the system accurately retrieves and displays recommendations based on the user's past transaction history. 2) Given that the user changes his purchase preference or behaviors', the system should be able provide recommendations that are updated in real-time to reflect any changes in the user's preferences or new products in the inventory.	Yu Ming Toh <tohyuming05@gmail.com>	4	13
19	As a customer who easily forgets his passwords, I want to have the convenience of not having to think and remember too many passwords, so that I can focus on having an enjoyable shopping experience	The website must be able to give suitable password recommendations that meet the latest security standards.	Ryan Tan <arrdeetee@outlook.com>	2	2
20	As a user, I would want to be able to change my personal details such as email, address, and etc. So that, incase I change my shipping address or any other details, I would be able to update it.	The website must be able to allow all users with accounts to change their personal details, usernames and passwords.	Jaeleong89@gmail.com <Jaeleong89@gmail.com>	4	5
21	As a user, I want to be able to easily search for a specific product by keying in the name or keywords So that, I would not have to browse for a long time till I find my product and I would be able to search for a product with relevant keywords if I don't know the specific name of the product.	The website must consist of a search bar to allows users to specifically search for a product they want or keywords relating to the products and the webpage must display all product with the keywords or the searched word.	Jaeleong89@gmail.com <Jaeleong89@gmail.com>	3	5
22	As a user, I want to be able to remove added items in my cart So that, there aren't any unnecessary or unwanted items in my cart and I do not accidentally purchase an item I do not want.	The website should allow users to remove any unwanted items that are in their cart. Updates made should be shown in real-time	Jaeleong89@gmail.com <Jaeleong89@gmail.com>	4	5

Sprint ID	Sprint Goal	Product Backlog	User Stories	Acceptance Criteria	Assigned To	Tasks	Priority	Effort	Definition of Done	Remaining Work
2	Enhance user experience and system functionality by implementing key features. Ensure robust error handling and system security to deliver a reliable and user-friendly e-commerce platform, where satisfied customers are able to search for their desired eco-friendly/affordable product with ease. Measure success by achieving a 20% increase in user engagement metrics (such as time spent on the platform and number of products viewed) and a 15% rise in completed transactions during the sprint.	Guest Login	As a guest new to the website, I would like to login with a guest account for conveniences so that I could explore the website without needing to register, experiencing a hassle-free introduction to the platform.	(1) Given a new user on the website, When they attempt to browse the website with a guest account Then the system be able to give the user basic functions such as browsing products and viewing content without any extensive registration steps. (2) Given a guest has session data like cart items/preferences, When the user decides to create a new account, Then all the session data should transfer to the new account for a consistent & seamless experience.	t t <tohhaozhuo@gmail.com>		3	13		
26						Design Login Screen			User interface (UI) design approved, implemented, and reviewed. Associated documentation updated.	1
72						Session Management			Session management functionality implemented, ensuring secure and seamless user sessions.	3
75						Configure Multiple Guest login			Configuration for multiple guest logins completed successfully. Relevant documentation updated to reflect changes.	2
88						Access handling			Users should be redirected to login page at every point that required	1
7		Adjusting Quantity of Items in Cart	As a customer, I want to adjust the number of an item in my cart so that I can buy the right amount of quantity for a product	Given that, I want to increment the quantity of a product to 2 instead of looking for the product again and adding it, When I click the plus button in the cart Then the number quantity will be live updated and reflect the changes to 2	Yu Ming Toh <tohyuming05@gmail.com>		4	1		
79						Design the interface for cart			Approval from the UX Designer, and Product Owner	2
80						Program the code for adjusting quantity in the cart			Code is completed and no bugs or error is present	1
82						Program the code for total price to correspond to the total quantity			Code have been tested via end-to-end tests and function as expected	1
81						Implement the code			All release documentation has been written and audited	0.5
8		Product Details	As an environmentalist, I want to view individual products so that I can see what material the product is made from, where is it from, etc.	1) An option to search for the product by product type 2) System to provide comprehensive details of a specific product that the consumer selected, including material information and ensure transparency about the composition of each product.	Yu Ming Toh <tohyuming05@gmail.com>		3	1		
83						Program a search and filter function for the product catalogue			Code is completed and all functional test are green	2
84						Design the UI for Product Details Page			Design approved after end-user testing	1
85						Design the database for product details			The database is deign with 3 Normalization Form	2
87						Integrate with database			Detabase connection is successful and with security measures implmented	1
86						Program a function to retrieve data from the database			Successful retrival of data from database	1
10		Email Confirmation	As a customer who is very organised, I want to receive an email after a successful payment, so that I can keep it in my file for reference in the future.	The website must send a confirmation email to user after receipt of payment.  1) The email must contain  Order Information Date and Time Shipping/Billing Address  2) The email must address the user by first name basis	Ryan Tan <arrdeetee@outlook.com>		4	2		
23						Configure Email Service			Email service configured and tested successfully. Configuration	3
24						Design Email Templates			Email templates designed and approved. Template files integrated into	1
35						Platform Integration			Email confirmation integrated seamlessly into the platform. Integration	2
36						Setup System to Generate Receipts			System configured to generate receipts upon successful transactions. Code and configuration reviewed, and documentation updated.	3
37						Implement Error Handling			Robust error handling mechanisms implemented for email confirmation	1
13		Different Signup/Signin Methods	As a relatively impatient customer, I want to to use different SignIn/Signup methods like my phone number and Social Media Accounts so that I can buy products without much hassle.	The website must have  1) different integrations like Facebook, Google and Mobile Login to allow users to log in or signup for an account.  2) For Apple, option to use Private Relay must be available	Ryan Tan <arrdeetee@outlook.com>		3	5		
25						Configure User Friendly UIUX			User interface and experience configured for seamless signup/signin methods. UI/UX approved and documented.	2
31						DB Setup			Database configured to support different signup/signin methods. Database schema updated, and configuration documented.	2
32						Implement Password Authentication			Password authentication mechanism implemented securely. Code reviewed, and authentication process documented.	2
33						Integrate APIs			External APIs for signup/signin integrated successfully. API integration code reviewed, and documentation updated.	2
34						Handle Callbacks			Callback mechanisms implemented to handle different signup/signin scenarios. Code reviewed, and callback handling documented.	1
16		Bot Verification	As a SysAdmin, I want the website to verify if I am human, so that Customers can use the website without fear of a Denial of Service Attack	The website must use 1) E-Captcha to verify if a user is a bot or human 2) ECaptcha can either be words or images	Ryan Tan <arrdeetee@outlook.com>		3	2		
27						Register Site with Google ReCaptcha			Site registered with Google ReCaptcha successfully. Relevant keys configured in the system. Configuration documentation updated.	1
28						Add Codes for Front End and Back End			Front-end and back-end code added to integrate Google ReCaptcha. Code reviewed, and documentation updated.	2
29						Verify User Responses			User responses to the ReCaptcha verified successfully. Verification process tested and documented.	2
30						Handle Verification Resposee			System configured to handle verification responses appropriately. Code reviewed, and documentation updated to include the handling process.	2
12		Payment Method	As a teenage consumer, I want to utilize the Visa pay-wave payment method so that I can have a seamless and convenient transaction.	1) An option to use Visa PayWave payment method 2) The payment process to be an almost immediate response, confirming the success of the transaction	Yu Ming Toh <tohyuming05@gmail.com>		4	5		
65						Design Payment Interface			Approval from the UX Designer, and Product Owner	3
64						Implement External API			Update project document refelecting the integration	2
66						Implement 3rd Party Integration			Performance testing and functional test are green	2
67						Configure Error Handling			All possible scenario tested and pose no problem	2
68						Enable Transaction Logging			All documentation has been written and updated	2
89						Design the payment successful page			UI accepted by UX designer and product owner	1
18		Product Recommendation	As an indecisive consumer, I want to view the recommended products based on my past transaction history and other consumer purchases so that I can discover new and relevant items that align with my preferences and products with promotions.	1) Given a registered user, the system accurately retrieves and displays recommendations based on the user's past transaction history. 2) Given that the user changes his purchase preference or behaviors', the system should be able provide recommendations that are updated in real-time to reflect any changes in the user's preferences or new products in the inventory.	Yu Ming Toh <tohyuming05@gmail.com>		4	13		
90						Design the product recommendation feature on the webpage			ok from the UX designer team, project manager and product manager	1
69						Program the recommendation algorithm			Code completed with no error	3
70						Implement Data Analysts and Monitoring			Product Reccommendation updating to different scenarios	3
91						Integrate with database			Data from database are able to be retrieved	1
22		Deleting items from cart	As a user, I want to be able to remove added items in my cart  So that, there aren't any unnecessary or unwanted items in my cart and I do not accidentally purchase an item I do not want.	The website should allow users to remove any unwanted items that are in their cart.  Updates made should be shown in real-time	Jaeleong89@gmail.com <Jaeleong89@gmail.com>		4	5		
50						Designing the Delete button and where to put			Delete button designed and its placement finalized in the cart interface. UI design approved and documented.	1
51						Coding the delete button to carry out its function			Delete button functionality coded and tested. Code reviewed, and documentation updated.	2
52						design UI for a delete confirmation pop-up			User interface for the delete confirmation pop-up designed and approved. UI design documentation updated.	1
53						Implement functionality of the confirmation pop-u			Delete confirmation pop-up functionality implemented and tested. Code reviewed, and documentation updated.	1