Agile Assignment 2

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# GlobalShopApp Project

## Short description of the project:

This project aims to build an open-source dynamic E-commerce website like Talabat or El Menus Applications, where the shop owners will be able to upload their shop data and customers can interact with the website GUI to navigate and buy what they desire.

## Teams

**Disclaimer: I’m aware that using agile concepts, the distribution of teams may not be exactly valid, however this division of teams aims to signify the strengths of each of the members.**

**We assume the basic T shaped skills of all the members, and the broad knowledge of web development skills/technologies among all the members and this tables only signifies each member strengths.**

### Members strong in Front-End Development

|  |  |  |
| --- | --- | --- |
| Team Member Names | Role | Expertise |
| Skylar Gates | React JSX Coding. | React, HTML, CSS, JSX, and JavaScript. |
| Marcus Hudson | Front-End Styling. | CSS, Photoshop, WordPress, JSX, and React. |
| Margot Arthur | UI Design. | Photoshop, Assets Creating, Graphic Design, and Adobe XD. |

### Members strong in Back-End Development

|  |  |  |
| --- | --- | --- |
| Team Member Names | Role | Expertise |
| Olivia Naruto | Database Creation | SQL, Mongo, MySQL, Oracle, and Database Linking. |
| Hinata Haruki | API Routing | Node JS, Open API, REST API, Express, and JavaScript. |
| Honokaa Minato | JavaScript Coding | JavaScript, Problem Solving, EJS, Node JS, and JSX. |
| Sakura Yamato | Authentication | Firebase, Google Authentication, DB Design, SQL and, JavaScript. |

### Members strong in various testing techniques

|  |  |  |
| --- | --- | --- |
| Team Member Names | Role | Expertise |
| Isabella Bezos | Web Testing | Wireshark, Postman, Debugging, APIs, and automation. |
| Klara Adison | GUI Testing | Black Box Techniques, Selenium IDE, Debugging, and Perfecto. |
| Morgan Erin | Code Testing | Unit Testing, Automation, Integration, Debugging, Black Box Techniques, APIs. |
| Kareem Ayman | Penetration Testing | Reverse Shell Script, Port Scanning, Packet Manipulation, Burp suite and SQL Injection. |

## Product Owner and Scrum Master

* Our Scrum Master will be a part time job, The Scrum Master will be selected from Teams based on the characteristics of our members; those who are aware with all the agile methodologies and principles and are able to follow the Scrum Master responsibilities such as a being a coach, servant leader and exhibits the suitable skills as being patient, knowledgeable, collaborative, … etc. Will be assigned as a part time Scrum Master for the duration of a specific sprint when they do not have much work on hand to avoid conflicts. Members that qualify as a scrum master, based on their characteristics and the ability to handle the scrum master responsibilities are Sakura Yamato, Klara Adison, and Kareem.
* Our Product Owner used to work previously as a product owner in various application development project, he is well knowledgeable in the business domain and got the right amount of a technical background, he is able to manage economics and communicate well with all of the stake holders and technical teams, he proved his skills in grooming the product backlog, and defining acceptance criteria, his very responsible and accountable and his name is Paul Mask.

## Possible Stakeholders

* Primary Stakeholders: Creditors/Sponsors, Shop Owners, Unions, Customer Representatives, and Component Sellers (COTS).
* Secondary Stakeholders: Regulators, Law Experts, Money Handlers such as Bank or Fawry Company.

And of course, depending on how we define stakeholders, some definitions would include the various type of Employees.

## Near Vision

**Note: This is Agile and not waterfall model, therefore we expect to finish a little of everything in each sprint.**

### Sprint 1

By the end of Sprint one, we desire to show our clients/stakeholders a glimpse of their investment, and the capabilities of the project saying that we need to capture and simulate the core features which defines an E-Commerce Website, according to this we can start with implementing an initial version for the product display page and a cart home page.

* Initial design of the cart and product display page, this design shall include only the necessary UI-assets for simulating the product selection and the addition to cart functionality, later in another sprints the UI shall expand to include various of other features and UX friendly methods.
* Initial design of the database including the implementation of a basic shop-product tables so that it can be displayed in our discussed simple initial UI.
* Necessary routing implementation for displaying the desired UI of this sprint through a local server.
* Simple usage of an online free open API, to give the client an idea of how things will look like.
* Linking of the implemented code.
* Designing necessary testing units for testing the code implemented later.

We expect the usage of node, express, react, adobe XD, MySQL for the required development in this sprint, and we expect the sprint to take about 4 weeks.

### Sprint 2

In Sprint two we expect an input of a basic functionality of addition/removal of products in and out of a cart through interactions with the product display page, and we desire to have a complete implementation of login/signup pages which is discussed as follows:

* UI Design of Login/Signup pages, this includes the design of necessary assets required to create this page.
* Ability to signup either as a customer or a shop owner.
* Implementation of a database table to store the user authentication information.
* UI/Integration Testing and debugging of the previous input.
* Researching various methods for login/signup penetration testing, so that the testing can be ready in an upcoming sprint.
* Necessary routing implementations for displaying the two pages.

We Expect this sprint to take about 4 weeks, and usage of the previously mentioned tools/technologies.

# Jira Setting Up Screenshots

Graphical user interface, application, email

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Figure 1 Setting Up #1

Graphical user interface, application

Description automatically generated

Figure 2 Setting Up #2

Graphical user interface, application, Teams

Description automatically generated

Figure 3 Setting Up #3

Graphical user interface, application, Teams

Description automatically generated

Figure 4 Setting Up #4

Graphical user interface, application

Description automatically generated

Figure 5 Setting Up #6

Graphical user interface, application, Teams

Description automatically generated

Figure 6 Setting Up #5

# Epics and Story Creation

**Note: I summarized the Epic description In** Epics with Child Stories Screenshot **Section (final version after creation please check this section)**

## Epics Creation

Graphical user interface, text, application

Description automatically generated

Figure 7 Creating First Epic

Note the following screenshots include how I created the epics and their descriptions, and the last screenshot shows how the epic finally look like after creation.

Further assignment details, story points will be presented in the story section.

Graphical user interface, text, application, Teams

Description automatically generated

Figure 8 Creating Second Epic

Graphical user interface, text, application, email

Description automatically generated

Figure 9 Creating Epic #3

Graphical user interface, text, application

Description automatically generated

Figure 10 Epic Viewing After Creation

## Story Creation Method

Note I will skip the screenshots of the creation of each story on its own, since I already presented the creation method in the following screenshots, however I will present to you the final version of the stories I have created in another section.

Graphical user interface, application

Description automatically generated

Figure 11 Creating a user story method

Graphical user interface, application, Teams

Description automatically generated

Figure 12 Linking a story as an issue to an epic method

Table

Description automatically generated with low confidence

Figure 13 Assigning the story to members method

Background pattern

Description automatically generated

Figure 14 Assigning the story to a sprint and adding story points method

### Story Points

Story points are important, they act as a measure of how much time/effort should the story take to finish, however there are multiple conventions for what’s equivalent to a story point in this report we will the following convention:

First, we will use Fibonacci sequence for the story size scaling which goes as following **1, 2, 3, 5, 8, 13, 21, 34.** And we estimate an Epic to be around 100 of story points where each story point represents third of a day worth of working.

Small stories should be about 5 to 8 points, medium stories should be 13 points and large stories can take up to 40 points, but notice rounding up for large stories aka if a story is 21 points, we write it as 20 (modified Fibonacci).

Notice that these measures are based on pervious experiences.

More details on story point and team velocity in: Story Points in More Details + Team Velocity.

## Epics with Child Stories Screenshot

Graphical user interface, text, application, email

Description automatically generated

Figure 15 Access and Authentication Epic with Its child stories

Graphical user interface, text, application, email

Description automatically generated

Figure 16 Various Secure Payment Methods Epic

Graphical user interface, text, application, email

Description automatically generated

Figure 17 Products Viewing and Selection Epic with Its child stories

Graphical user interface, text, application

Description automatically generated

Figure 18 How to add a child story to an Epic

## Created Stories with Associated Tasks (substories)

Graphical user interface, text, application, email

Description automatically generated

Figure 19 Cart Page Story with Tasks

Graphical user interface, application

Description automatically generated

Figure 20 Product Display Page Story with Tasks

Graphical user interface, text, application, email

Description automatically generated

Figure 21 Sign Up Page Story with Tasks

Graphical user interface, text, application, email

Description automatically generated

Figure 22 Login Page Story with Tasks

Graphical user interface, text, application, email

Description automatically generated

Figure 23 Storing Accounts Story with Tasks

Graphical user interface, text, application, email

Description automatically generated

Figure 24 Password Recovery Story with Tasks

Graphical user interface, text, application

Description automatically generated

Figure 25 Different Users Story

Graphical user interface, text, application

Description automatically generated

Figure 26 Safe and Secure Access Story with Tasks.

Graphical user interface, application

Description automatically generated

Figure 27 Products Filtering Story

Graphical user interface, text

Description automatically generated

Figure 28 Product Rating Story

## Screenshots with Additional Information

Graphical user interface, text, application, email

Description automatically generated

Figure 29 Writing Comments in Jira

**Note: A story can have multiple members working on it in Agile Methodology, but Jira has limitations regarding this functionality.**

Graphical user interface, application

Description automatically generated

Figure 30 Assigning story to a user

Graphical user interface

Description automatically generated with medium confidence

Figure 31 We can also add a label/start/Due Data for stories/epics

# Product Backlog

## Product Backlog Screenshot

Application

Description automatically generated with low confidence

Figure 32 Product Backlog

## Product Backlog Ordering Rationale

The items in the product backlog were ordered according to their priority; The priority of an item was offered based on its business value or ROI, You can clearly see that we picked up the core features that make up an E-Commerce website at first, Every E-Commerce website is built upon three main features, which are the ability to select and navigate products of a certain shop, The ability to securely purchase the products via various payment methods and of course to achieve all of this we need different types of users and accounts.

If you were to ask what would come next in our product log, this will be the implementation of various payment methods since as described this is one of the three core features that build up an E-commerce website.

One more reason we have chosen this order is to show the stakeholders a satisfying output at the beginning of the work, and to give them a bigger picture and idea about the project, this can only be done by showing them an example of a displayed products and adding them to their cart, so to do that we had to start with implementing the product display and cart pages.

Other reasons we choose to put Access and Authentication stories in the top, Is a technical reason, because this feature will be crucial in implementing the upcoming features and performing various types of testing especially penetration testing which falls under the umbrella of security testing and of course any E-Commerce website must be secure or we would rather have a catastrophic consequences.

# Moving from Product Backlog to Sprint Backlog Method

Notice: I’m only showing one example of how to move, since this is sufficient to prove that I’m able to perform this functionality. (And I also noticed the need of the screenshot after finishing sprint 1 :/).

**Notice that my sprint duration is 4 weeks for both sprints.**

Graphical user interface, application, Teams

Description automatically generated

Figure 33 We can move from product backlog to the sprint backlog by dragging

Graphical user interface, application

Description automatically generated

Figure 34 Start sprint with start button and choose duration

# Story Decomposition into Sub Stories

**Please check the section:** Created Stories with Associated Tasks (substories) **To view the substories (tasks) that I have divided into each story.**

**You can also find the sub stories of the sprints in the Sprint Kanban Sections.**

# Workflow

# Story Points in More Details + Team Velocity

For our story points scaling we will be using Fibonacci sequence scaling which goes as 1,2,3,5,8,13,21,34.

However, we will be using a modified Fibonacci sequence for our estimations where it goes like 1,2,3,5,8,13,20,30,40.

Since story points are just an estimate, saying 21 makes it feel like we are precise, but we are not precise we are not if it will take 21 so we round up 21 to 20, so that we are clear that this story points are just an estimate, same goes for any story points numbers above 20 we will always be rounding them up down.

We estimate that 3 story points can be done in a single day or are equivalent to a day worth of effort.

Of course, we build those conventions and estimation based on our previous experiences working with this team, and the conventions may vary from a company to another or even from a project to another depending on the team size and their experiences.

Our projects tend to be huge; therefore, our story points might have a greater value than the usual, also you can find that our Sprint uses the maximum size often, which is 4 weeks.

Based on previous experiences and you can also notice this in Sprint 1 Kanban and Sprint 2 Kanban, Our team is able to finish an estimate of 55 to 65 story points per sprint aka per 4 weeks.

So, you can find out that our team estimated velocity is about 55 to 65 story points per sprint.

For more clarification on our conventions, we estimate that:

* 5 to 8 story points represents a small sized story.
* 13 story points represents a medium sized story.
* 20 story points represents a large sized story.
* 30 – 40 story points represents a huge story that must be divided into substories.
* 100 points is the size of an Epic that can be done on two sprints.
* 140 to 180 points is the size of a Large Epic that needs 3 sprints (months) to finish.

Beyond this point we will be using T-shirt sizes as L-XL-XXL referring to large initiatives which are a collection of Epics.

# Sprint 1 Kanban

Note that my sprint durations are 4 weeks therefore they will take about 30 days.

## Day 0

Graphical user interface, text, application

Description automatically generated

Figure 35 Stories in To Do List and will move in the following days

## Day 5

Graphical user interface, text, application, chat or text message

Description automatically generated

Figure 36 Sprint 1 Day 5 ss1

Graphical user interface, text, application

Description automatically generated

Figure 37 Sprint 1 Day 5 ss2

## Day 10

Graphical user interface, text, application, chat or text message

Description automatically generated

Figure 38 Sprint 1 Day 10 ss1

Graphical user interface, text, application, chat or text message

Description automatically generated

Figure 39 Sprint 1 Day 10 ss2

## Day 20

Graphical user interface, text, application

Description automatically generated

Figure 40 Sprint 1 Day 20 ss1

Graphical user interface, text, application, chat or text message

Description automatically generated

Figure 41 Sprint 1 Day 20 ss2

## Day 25

Graphical user interface, application

Description automatically generated

Figure 42 Sprint 1 Day 25 ss1

Graphical user interface, text, application, chat or text message

Description automatically generated

Figure 43 Sprint 1 Day 25 ss2

## Day 28

Graphical user interface, application, Teams

Description automatically generated

Figure 44 Sprint 1 Day 28

Graphical user interface, application

Description automatically generated

Figure 45 Sprint Completion on Jira

# Sprint 2 Kanban

## Day 0

Graphical user interface, application, Teams

Description automatically generated

Figure 46 Sprint 2 Kanban Day 0 ss1

Graphical user interface

Description automatically generated

Figure 47 Sprint 2 Kanban Day 0 ss2

## Day 5

Graphical user interface, application, Teams

Description automatically generated

Figure 48 Sprint 2 Kanban Day 5

## Day 13

Graphical user interface, application

Description automatically generated

Figure 49 Sprint 2 Kanban Day 13

## Day 19

Graphical user interface, application, Teams

Description automatically generated

Figure 50 Sprint 2 Kanban Day 19

## Day 24

Graphical user interface, application, Teams

Description automatically generated

Figure 51 Sprint 2 Kanban Day 24

## Day 28

Graphical user interface, application, Teams

Description automatically generated

Figure 52 Sprint 2 Kanban Day 28

**Notice: The failure to complete some of the stories, thus this story will move back to the product Backlog and remaining tasks will be completed later.**

## Moving Incomplete Stories to the product Backlog

Graphical user interface, application

Description automatically generated

Figure 53 Moving Incomplete stories back to the backlog

Graphical user interface, application

Description automatically generated

Figure 54 Stories moved back to the backlog

# Sprint Documentation

## Sprint One Documentation

### General Idea and Sprint Size

This sprint duration is four weeks, in this sprint we planned to finish the basic main functionality of the product display and cart pages, and the estimate size is 60 story points.

### Previous Sprint Data and Input

This is the first sprint, no previous data recorded.

### Stories Moved from the Product Backlog to the Sprint

We can see that two stories were moved from the product backlog to the sprint backlog which are the product display page and cart page stories.

### Epics Covered During this Sprint

This sprint represents a milestone in the product and viewing and selection Epic however the Epic is not complete yet and requires a further sprint.

### Completed Stories

* Product Display Page Story
* Cart Page Story

### Completed Tasks

All tasks associated with the completed stories were completed during this sprint.

### Stories Moved Back to the Product Backlog

This sprint was successful and thankfully nothing was moved back to the product backlog.

### Obstacles Faced during the Sprint

In this sprint we faced some issues connecting to certain and websites and dealing with some APIs, after the contact with the IT/Networking team the problem was smoothly solved, and nothing impacted our performance.

### Did the sprint match the initial vision?

We can clearly see that the sprint has been completed successfully matching our near vision of the sprint.

## Sprint Two Documentation

### General Idea and Sprint Size

This sprint focuses to cover one of the core features for great presentation, business value and opening the way for further sprints and features implementation, this sprint covers 4 main stories from the Access and Authentication Epic, and it’s estimate size is about 70 story points.

### Previous Sprint Data and Input

The previous sprint has been successful and multiple core stories has been completed from the Product Viewing and Selection Epic, however this Sprint will focus on the Access and Authentication app, so it doesn’t directly get any input or benefit from the previous sprint, this decision of change of focus was taken due to the presented business value.

### Stories Moved from the Product Backlog to the Sprint

* Login Page Story
* Sign Up Page Story
* Storing User Accounts Story
* Different Type of Users Story

### Epics Covered During this Sprint

This sprint focuses mainly on the Access and Authentication Epic; however, this requires awaits about more sprints for completion.

### Completed Stories

The Login Page and Sign-Up Page stories were completed in this sprint.

### Completed Tasks

* All tasks under login page story were covered.
* All tasks under signup page were covered.
* Database table for storing user data task was covered from the Storing User Accounts story.
* Implementation of the three-user privilege system was covered from the story Different Type of Users.

### Stories Moved Back to the Product Backlog

* Storing User Accounts
* Different Type of Users

Those two stories were returned to the backlog since not all their substories aka tasks were completed, therefore they will be completed on further sprints.

### Obstacles Faced during the Sprint

In this sprint we faced various issues related to the legality of using some of the penetration testing technologies and tools, however we finally got the acceptance of usage of certain tools for on the scale of the private institution of the company and for nothing else.

### Feedback for Further Sprints

This sprint was estimated to be around 70 story points which is larger than the team estimated velocity, so by the failure of completion of this sprint we can confirm our estimated team velocity which is around 55 to 65 story points per sprint so it’s better to stick to this range for the near upcoming sprints.

### Did the sprint match the initial vision?

We can find that this sprint failed to match the initial near vision presented at first, and this is very normal because one cannot expect everything from the start otherwise there will be no use for agile.

# Daily Scrum Document

## Sprint 1 Example

This first screenshot discusses a day in the middle of week 1 of the Sprint where Margot Arthur and Hinata Haruki were working on the project and illustrating their daily activities.

Graphical user interface, text

Description automatically generated

Figure 55 Sprint 1 Daily Scrum Example

## Sprint 2 Example

Graphical user interface, text, application

Description automatically generated

Figure 56 Sprint 2 Daily Scrum Example