

"Scrum Framework for E-commerce Website Development"

Scrum Framework Applied to E-commerce Website Development Using Jira

In this project, the Scrum framework was implemented to manage the development of a comprehensive e-commerce website. The key elements of Scrum, including roles, activities, and time durations, were systematically organized within Jira to ensure an efficient project management process.

1. Scrum Roles:

- **Product Owner:** The Product Owner was responsible for defining and prioritizing the product backlog, ensuring that the features developed aligned with business needs. For instance, they created and prioritized user stories in Jira, such as “User Registration and Login” and “Product CatLog.”
- **Scrum Master:** The Scrum Master facilitated Scrum ceremonies and removed impediments. They set up and managed sprint planning sessions in Jira, ensuring the team followed Scrum practices and timelines.
- **Development Team:** The Development Team self-organized to complete tasks from the sprint backlog, including design, development, and testing. They worked collaboratively within Jira, updating the status of tasks and ensuring transparency in progress.

2. Scrum Activities and Their Implementation in Jira:

1. Product Backlog Creation and Refinement:

The Product Owner, with input from stakeholders, created a comprehensive backlog in Jira, listing all necessary features, such as user registration, shopping cart functionality, and payment gateway integration. This backlog was continuously refined to ensure clarity and prioritization.

2. Sprint Planning:

Sprint planning sessions were held to select user stories from the backlog for the upcoming sprint. For example, in Sprint 1, the team focused on the “User Registration and Login” story, breaking it down into smaller tasks like designing the UI and implementing backend authentication.

3. Daily Stand up:

The team conducted daily stand-ups, each lasting 15 minutes, to discuss progress and address any blockers. These updates were reflected in Jira, where each team member updated the status of their tasks from “To Do” to “In Progress” and eventually to “Done.”

4. Sprint Review:

At the end of each sprint, the completed features were demonstrated to stakeholders using Jira’s sprint board. For instance, at the end of Sprint 3, the team showcased the

fully functional shopping cart, gathering feedback that informed the next sprint's planning.

5. **Sprint Retrospective:**

The team reflected on the sprint's successes and challenges during the retrospective. They used Jira to review completed tasks and discussed process improvements, such as enhancing test automation, which was then added as a task in the next sprint.

6. **Sprint Execution:**

Throughout each sprint, the team worked on tasks from the sprint backlog. For example, during Sprint 2, they focused on implementing the "Product CatLog," ensuring users could browse and search for products by category.

7. **Backlog Refinement:**

Regular backlog refinement sessions were conducted to ensure the backlog in Jira was up-to-date and prioritized. This included breaking down large stories into smaller, more manageable tasks and adjusting priorities based on stakeholder feedback.

3. **Time Durations:**

The time durations for each Scrum activity were defined as follows:

- **Sprint Duration:** 2 weeks per sprint.
- **Sprint Planning:** 4 hours for each sprint planning session.
- **Daily Stand up:** 15 minutes each day.
- **Sprint Review:** 4 hours at the end of each sprint.
- **Sprint Retrospective:** 2 hours at the end of each sprint.
- **Backlog Refinement:** 1-2 hours per week.

4. **Example of Jira Project Setup:**

- **Epic Name:** E-commerce Website Development
- **User Stories:**
 1. **User Registration and Login:** As a user, I want to register and log in to the website.
 2. **Product CatLog:** As a user, I want to browse and search for products by category and keywords.
 3. **Shopping Cart:** As a user, I want to add items to my shopping cart and proceed to checkout.

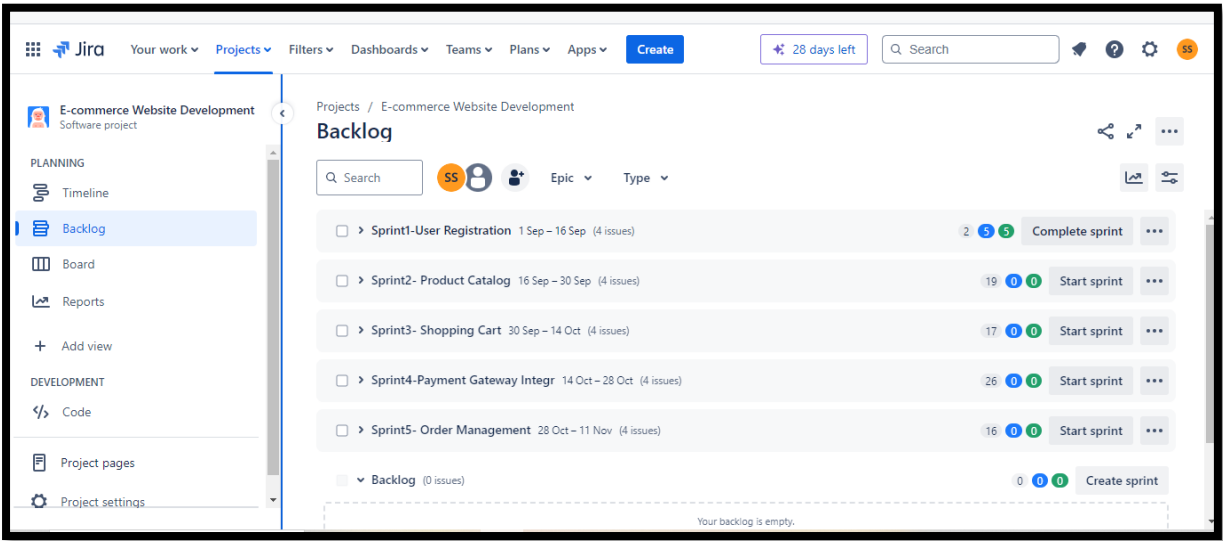
- **Tasks:**

For the "User Registration and Login" story, tasks included designing the registration UI, implementing backend authentication, and integrating email verification.

- **Sprints:**

The project was divided into multiple sprints, each focusing on different aspects of the website, such as user registration, product catalog, and shopping cart functionality.

1. Project Name = E-commerce Website Development



2. Epic =

Projects / [E-commerce Website Development](#)

Backlog

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> SS E-commerce Website Development

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<input type="checkbox"/> > Sprint1-User Registration	1 Sep – 16 Sep (4 issues)	2 5 5	Complete sprint	...
<input type="checkbox"/> > Sprint2- Product Catalog	16 Sep – 30 Sep (4 issues)	19 0 0	Start sprint	...
<input type="checkbox"/> > Sprint3- Shopping Cart	30 Sep – 14 Oct (4 issues)	17 0 0	Start sprint	...
<input type="checkbox"/> > Sprint4-Payment Gateway Integr	14 Oct – 28 Oct (4 issues)	26 0 0	Start sprint	...
<input type="checkbox"/> > Sprint5- Order Management	28 Oct – 11 Nov (4 issues)	16 0 0	Start sprint	...
<input type="checkbox"/> ▾ Backlog (0 issues)		0 0 0	Create sprint	

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3. Sprint 1

Projects / E-commerce Website Development

Backlog

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☐ ▾ Sprint1-User Registration 1 Sep – 16 Sep (4 issues)

2 5 5 Complete sprint

Complete all tasks related to user registration and login.

ECWD-2 User Registration and Login

E-COMMERCE...

DONE ▾

5

☒ ECWD-7 Design Registration and Login UI

E-COMMERCE...

IN REVIEW ST...

2

☒ ECWD-8 Implement Backend for User Registration and Login

E-COMMERCE...

IN PROGRESS ▾

3

☒ ECWD-9 Email Verification Implementation

E-COMMERCE...

TO DO ▾

2

+ Create issue

Projects / E-commerce Website Development

Backlog

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☐ ▾ Sprint1-User Registration 1 Sep – 16 Sep (4 issues)

2 5 5 Complete sp

Complete all tasks related to user registration and login.

ECWD-2 User R...

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☒ ECWD-7 D...

E-COMMERCE WEBSITE...

IN REVIEW STAGE ▾

2

☒ ECWD-8 I...

E-COMMERCE WEBSITE...

IN PROGRESS ▾

3

☒ ECWD-9 E...

E-COMMERCE WEBSITE...

TO DO ▾

2

+ Create issue

☐ ▸ Sprint2- Product Catalog 16 Sep – 30 Sep (4 issues)

19 0 0 Start sp

ECWD-1 /

1

ECWD-2

User Registration and Login

Done ▾

Done

Actions ▾

Description

As a user, I want to register and log in to the website so that I can access personalized features like order history and wishlist.

4. Sprint 2

Projects / E-commerce Website Development

Backlog

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> Sprint1-User Registration

1 Sep – 16 Sep

(4 issues)

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Complete sprint

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▼ Sprint2- Product Catalog

16 Sep – 30 Sep

(4 issues)

19

0

0

Start sprint

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Complete all tasks related to the product catalog.

ECWD-3

Product Catalog

E-COMMERCE WEBSITE...

TO DO ▾

8

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✓ ECWD-10

Design Product Catalog UI

E-COMMERCE WEBSITE...

TO DO ▾

3

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✓ ECWD-11

Implement Product Listing and Filtering

E-COMMERCE WEBSITE...

TO DO ▾

5

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✓ ECWD-12

Backend Integration for Product Details

E-COMMERCE WEBSITE...

TO DO ▾

3

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> Sprint1-User Registration

1 Sep – 16 Sep

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Complete sp

▼ Sprint2- Product Catalog

16 Sep – 30 Sep

(4 issues)

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Complete all tasks related to the product catalog.

ECWD-3

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TO DO ▾

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E-COMMERCE WEBSITE...

TO DO ▾

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✓ ECWD-12

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E-COMMERCE WEBSITE...

TO DO ▾

3

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Create issue

ECWD-1 /

ECWD-3

Product Catalog

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To Do ▾

⚡ Actions ▾

Description

As a user, I want to browse and search for products by category and keywords, so I can easily find items I want to purchase.

5. Sprint 3

Projects / [E-commerce Website Development](#)

Backlog

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☐ ▾ Sprint3- Shopping Cart 30 Sep – 14 Oct (4 issues) 17 0 0 Start sprint ...

Complete all tasks related to the shopping cart.

<input type="checkbox"/> ECWD-4 Shopping Cart	E-COMMERCE WEBSITE...	TO DO ▾	8	=	
<input checked="" type="checkbox"/> ECWD-16 Design Shopping Cart UI	E-COMMERCE WEBSITE...	TO DO ▾	2	=	
<input checked="" type="checkbox"/> ECWD-17 Implement Add to Cart Functionality	E-COMMERCE WEBSITE...	TO DO ▾	4	=	
<input checked="" type="checkbox"/> ECWD-18 Integrate Cart with Backend	E-COMMERCE WEBSITE...	TO DO ▾	3	=	

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4 issues | Estimate 17

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☐ > Sprint2- Product Catalog 16 Sep – 30 Sep (4 issues) 19 0 0 Start sp

☐ ▾ Sprint3- Shopping Cart 30 Sep – 14 Oct (4 issues) 17 0 0 Start sp

Complete all tasks related to the shopping cart.

<input type="checkbox"/> ECWD-4 Shoppi...	E-COMMERCE WEBSITE...	TO DO ▾	8		
<input checked="" type="checkbox"/> ECWD-16 D...	E-COMMERCE WEBSITE...	TO DO ▾	2	=	
<input checked="" type="checkbox"/> ECWD-17 I...	E-COMMERCE WEBSITE...	TO DO ▾	4	=	
<input checked="" type="checkbox"/> ECWD-18 I...	E-COMMERCE WEBSITE...	TO DO ▾	3	=	

ECWD-1 / ECWD-4

Shopping Cart

...

To Do ▾ ⚡ Actions ▾

Description

As a user, I want to add items to my shopping cart, view the cart, and proceed to checkout.

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6. Sprint 4

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Backlog

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☐ Sprint3- Shopping Cart 30 Sep – 14 Oct (4 issues) 17 0 0 Start sprint

☒ Sprint4-Payment Gateway Integr 14 Oct – 28 Oct (4 issues) 26 0 0 Start sprint

Complete all tasks related to payment gateway integration.

<input type="checkbox"/> ECWD-5 Payment Gateway Integration	E-COMMERCE WEBSITE...	TO DO	13	=	8
<input checked="" type="checkbox"/> ECWD-13 Select and Integrate Payment Gateway	E-COMMERCE WEBSITE...	TO DO	5	=	8
<input checked="" type="checkbox"/> ECWD-14 Develop Payment Flow	E-COMMERCE WEBSITE...	TO DO	5	=	8
<input checked="" type="checkbox"/> ECWD-15 Implement Payment Confirmation and Receipt Email	E-COMMERCE WEBSITE...	TO DO	3	=	8

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Projects / E-commerce Website Development

Backlog

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☐ Sprint1-User Registration 1 Sep – 16 Sep (4 issues) 2 5 5 Complete sp

☐ Sprint2- Product Catalog 16 Sep – 30 Sep (4 issues) 19 0 0 Start sp

☐ Sprint3- Shopping Cart 30 Sep – 14 Oct (4 issues) 17 0 0 Start sp

☒ Sprint4-Payment Gateway Integr 14 Oct – 28 Oct (4 issues) 26 0 0 Start sp

Complete all tasks related to payment gateway integration.

<input type="checkbox"/> ECWD-5 Payme...	E-COMMERCE WEBSITE...	TO DO	13		
<input checked="" type="checkbox"/> ECWD-13 S...	E-COMMERCE WEBSITE...	TO DO	5	=	
<input checked="" type="checkbox"/> ECWD-14 D...	E-COMMERCE WEBSITE...	TO DO	5	=	

ECWD-1 / ECWD-5

Payment Gateway Integration

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To Do Actions

Description

As a user, I want to securely pay for my order using various payment methods.

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7. Sprint 5

Projects / E-commerce Website Development

Backlog

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▼ Sprint5- Order Management 28 Oct – 11 Nov (4 issues)

16 0 0 Start sprint ...

Complete all tasks related to order management.

<input type="checkbox"/>	ECWD-6 Order Management	E-COMMERCE WEBSITE...	TO DO ▾	8	=	
<input checked="" type="checkbox"/>	ECWD-19 Design Admin Order Management UI	E-COMMERCE WEBSITE...	TO DO ▾	3	=	
<input checked="" type="checkbox"/>	ECWD-20 Implement Order Tracking and Status Updates	E-COMMERCE WEBSITE...	TO DO ▾	3	=	
<input checked="" type="checkbox"/>	ECWD-21 Implement Customer Notification System	E-COMMERCE WEBSITE...	TO DO ▾	2	=	

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4 issues | Estimate: 16

Projects / E-commerce Website Development

Backlog

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▼ Sprint5- Order Management 28 Oct – 11 Nov (4 issues)

16 0 0 Start sp

Complete all tasks related to order management.

<input type="checkbox"/>	ECWD-6 Order ...	E-COMMERCE WEBSITE...	TO DO ▾	8		
<input checked="" type="checkbox"/>	ECWD-19 D...	E-COMMERCE WEBSITE...	TO DO ▾	3	=	
<input checked="" type="checkbox"/>	ECWD-20 I...	E-COMMERCE WEBSITE...	TO DO ▾	3	=	
<input checked="" type="checkbox"/>	ECWD-21 I...	E-COMMERCE WEBSITE...	TO DO ▾	2	=	

+ Create issue

ECWD-1 /
ECWD-6

Order Management

...

To Do ▾ ⚡ Actions ▾

Description

As an admin, I want to manage orders, track their status, and update customers about their order progress.

8. Board

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Sprint1-User Registration

Complete all tasks related to user registration and login.

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Complete sprint ⋮

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TO DO 1

Email Verification Implementation

E-COMMERCE WEBSITE DEVELOPMENT

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IN PROGRESS 1

Implement Backend for User Registration and Login

E-COMMERCE WEBSITE DEVELOPMENT

✓ ECWD-8

3 👤

IN REVIEW STAGE 1

Design Registration and Login UI

E-COMMERCE WEBSITE DEVELOPMENT

✓ ECWD-7

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DONE 1 ✓

User Registration and Login

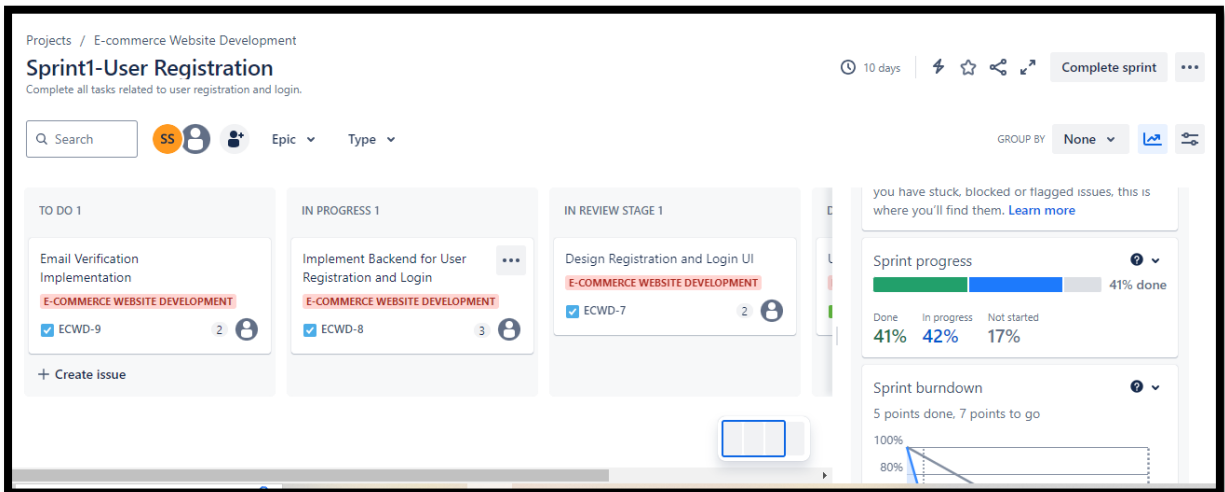
E-COMMERCE WEBSITE DEVELOPMENT

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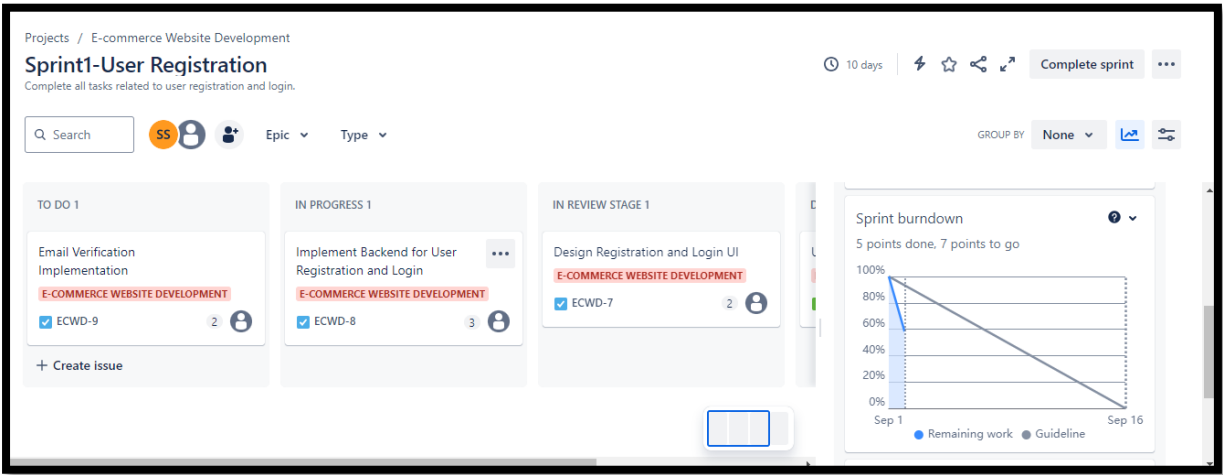
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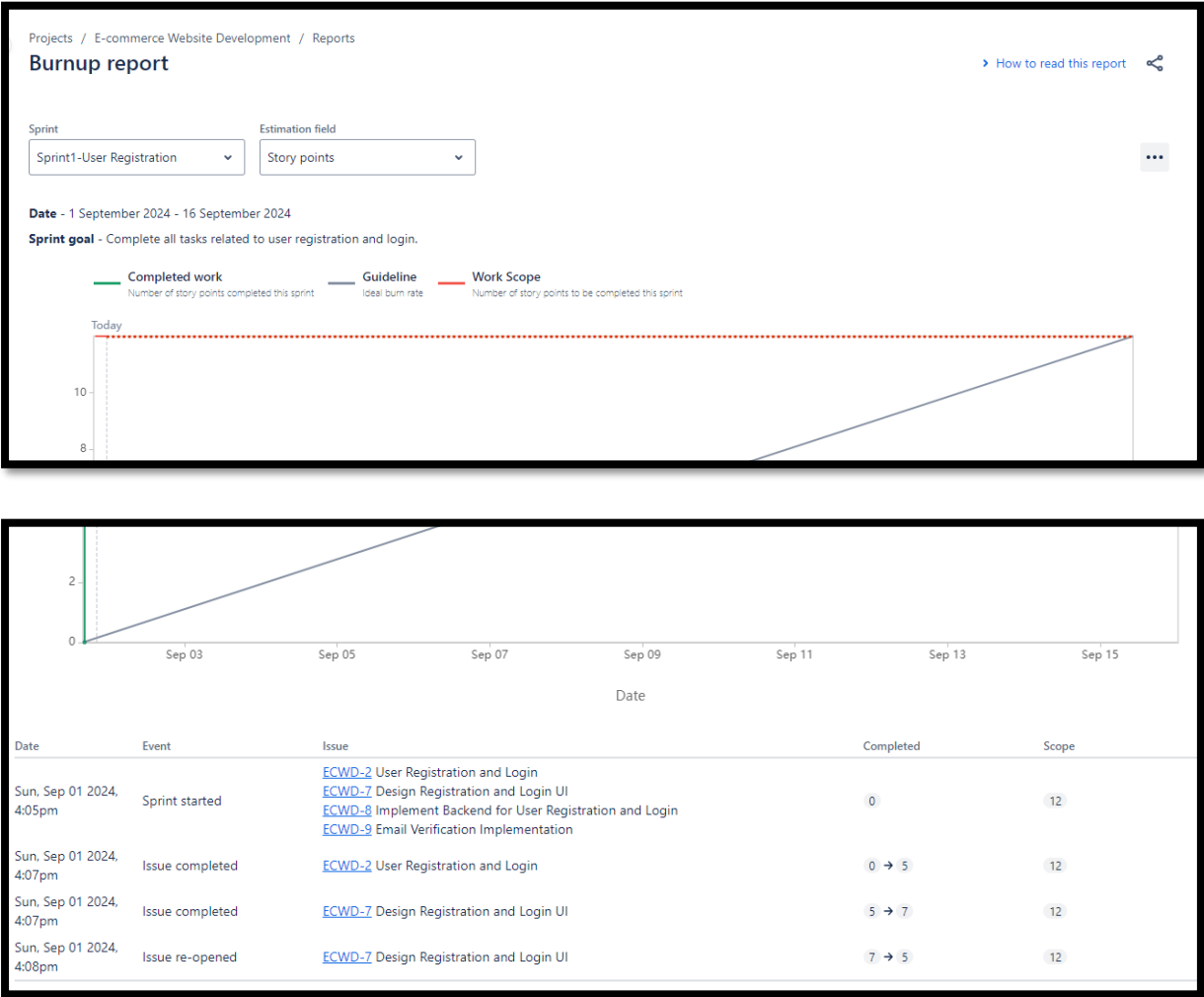
9. Sprint Progress



10. Sprint Burndown



11. Report



12. Timeline

