School of Computer Science Engineering and Technology

Course- B.Tech.   Type- Core
Course Code- CSET205   Course Name: Software Engineering
Year-   2023-24   Semester- Even
DAY: MONDAY   Batch- All

Lab Assignment 05 –

CO-Mapping

Exp. No.	Name	CO1	CO2	CO3
05	Agile scrum project management	--	✓	✓

Objective: The main objective of this assignment is to demonstrate the setup and management of software development in Agile working environment.

Agile Software development: Agile software development is more than a software framework. It is an umbrella, consists of agile development practices and frameworks based on agile manifesto and principles.

JIRA: JIRA is an online software suite to setup and manage agile software development. Jira Software is an agile project management tool that **supports any agile methodology, be it scrum, kanban, or your own unique flavour**. From agile boards, backlogs, roadmaps, reports, to integrations and add-ons you can plan, track, and manage all your agile software development projects from a single tool.

For more information, please visit the following link.

https://www.atlassian.com/software/jira/agile

Product Backlog: A product backlog is a prioritized list of work for the development team that is derived from the roadmap and its requirements. The most important items are shown at the top of the product backlog so the team knows what to deliver first.
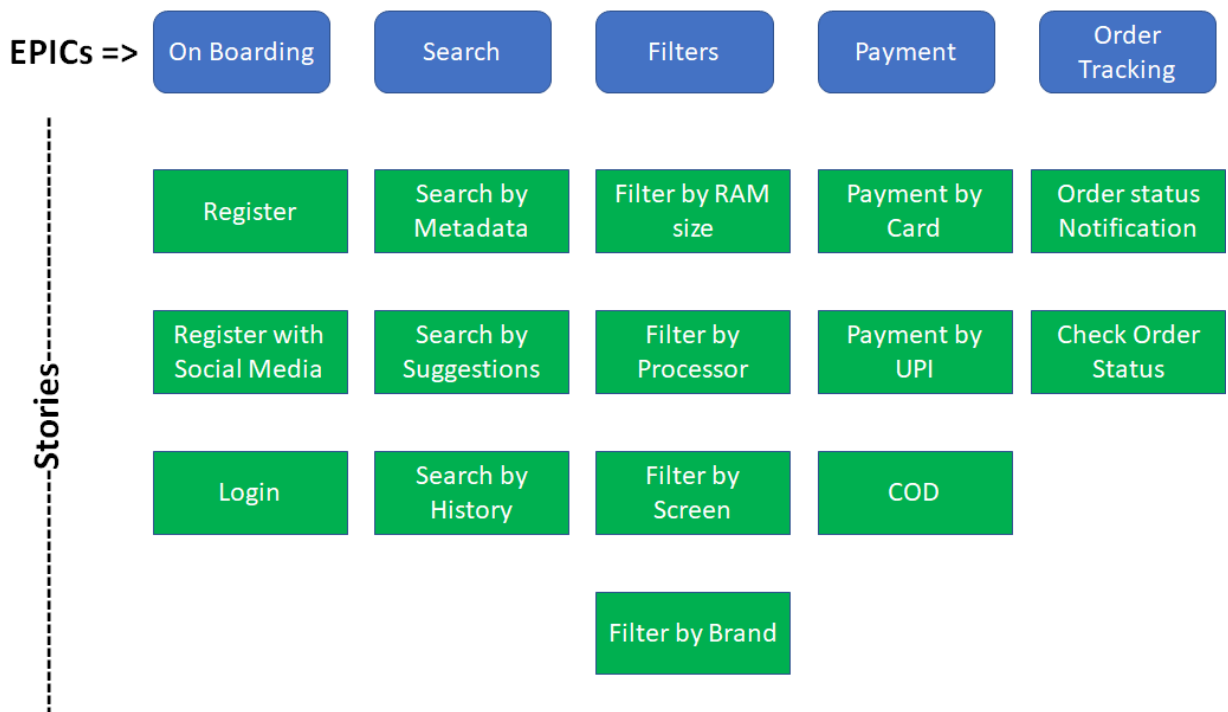
[https://www.atlassian.com/agile/scrum/backlogs]

1. Product backlog is a list which contains all the requirements or features of the product/ Software to be developed.
2. Product backlog is divided into N number of Epics.
3. Each Epics can be divided into Y number of Stories (User Stories).
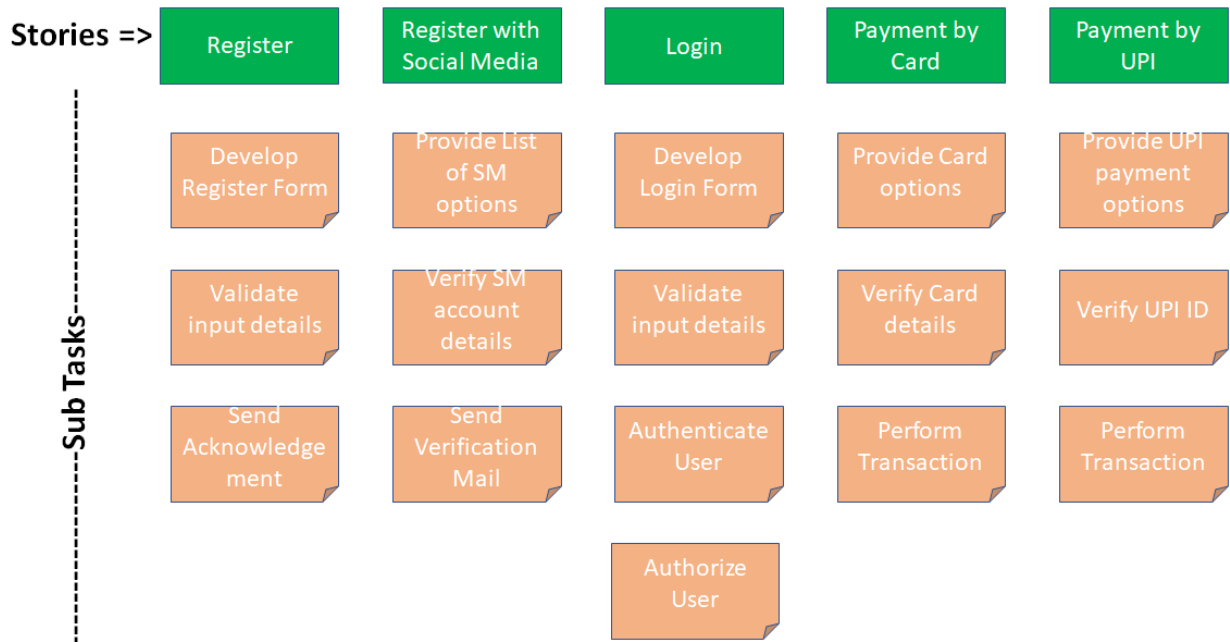4. Each story will be further divided into X number of sub-tasks.

[https://www.visual-paradigm.com/scrum/theme-epic-user-story-task/]
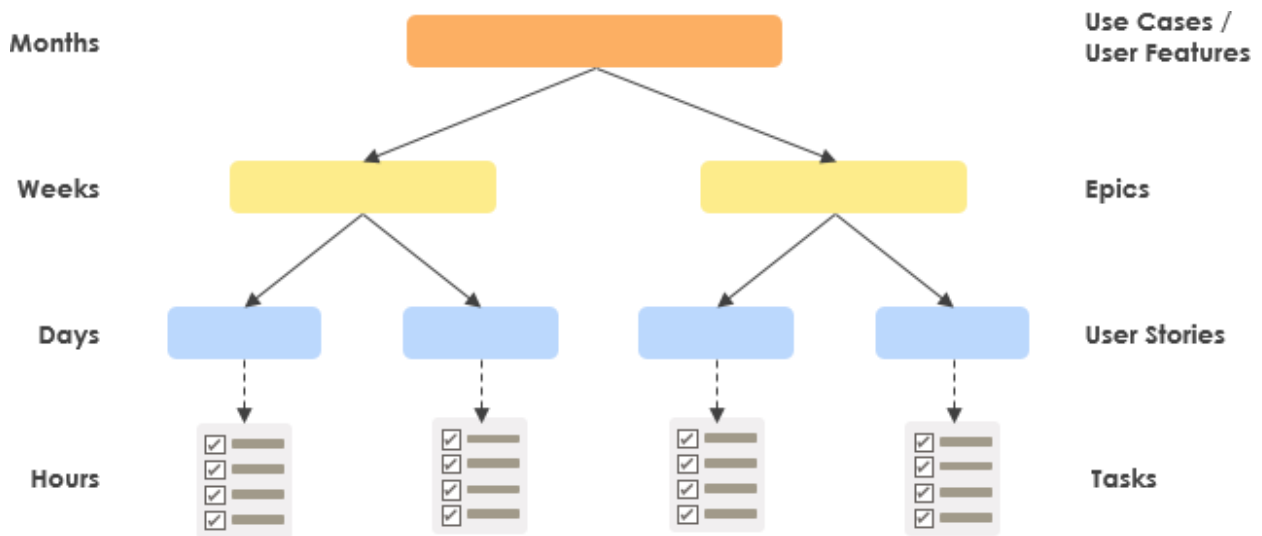
Example: Epics and Stories (User Stories) for an Online Mobile Store.

Example: Stories (User Stories) and Sub-Tasks.

Stories =>

| Register | Register with Social Media | Login | Payment by Card | Payment by UPI |

Sub Tasks

Develop Register Form	Provide List of SM options	Develop Login Form	Provide Card options	Provide UPI payment options
Validate input details	Verify SM account details	Validate input details	Verify Card details	Verify UPI ID
Send Acknowledgement	Send Verification Mail	Authenticate User	Perform Transaction	Perform Transaction
		Authorize User		

Problem Statement:

Identify Epics, Stories, and sub-tasks for the Following Software Problem and feed them into ZIRA:

Online Examination Portal

Assignment details: Assignment is divided into three parts:

Part 01: Project Setup on ZIRA.

Part 02: Feed software requirements into the project.

A. Backlog creation (Stories)
B. Epics creation
C. Sub-Task creation
D. Sprint creation

Demo video link: https://youtu.be/XdP4yeStEyU

Part 03: Creating Bit-Bucket/ GitHub repository and connect a separate branch with each story.

Demo video link: https://youtu.be/OtXri__oDcQ

[Follow the execution flow to complete your assignment as given ahead]

Part 01: Setup you project on JIRA.

1. Visit **https://www.atlassian.com/** and click on Sign In.
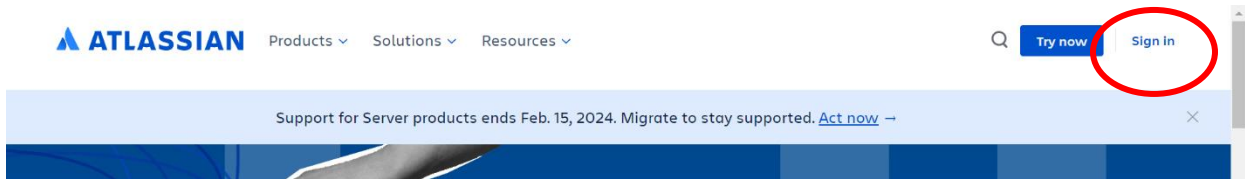
2. Click on **continue** with the Google account. **(Do not use Bennett Account)**
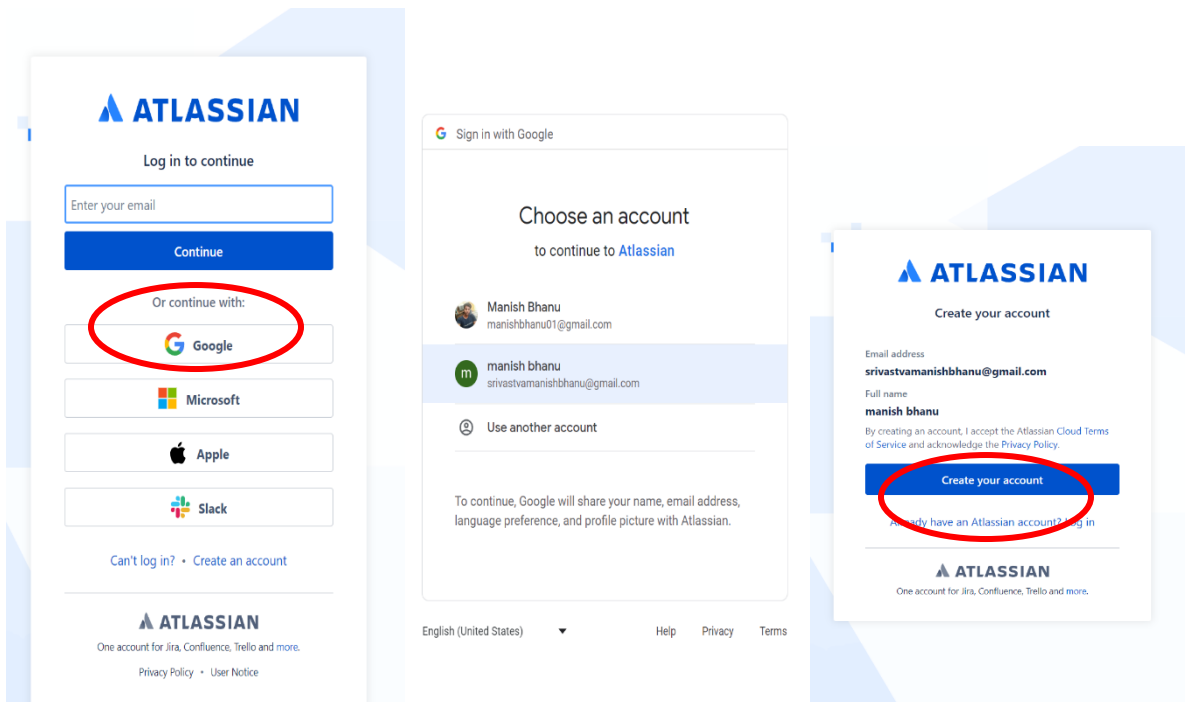
3. Select Jira Software Option.
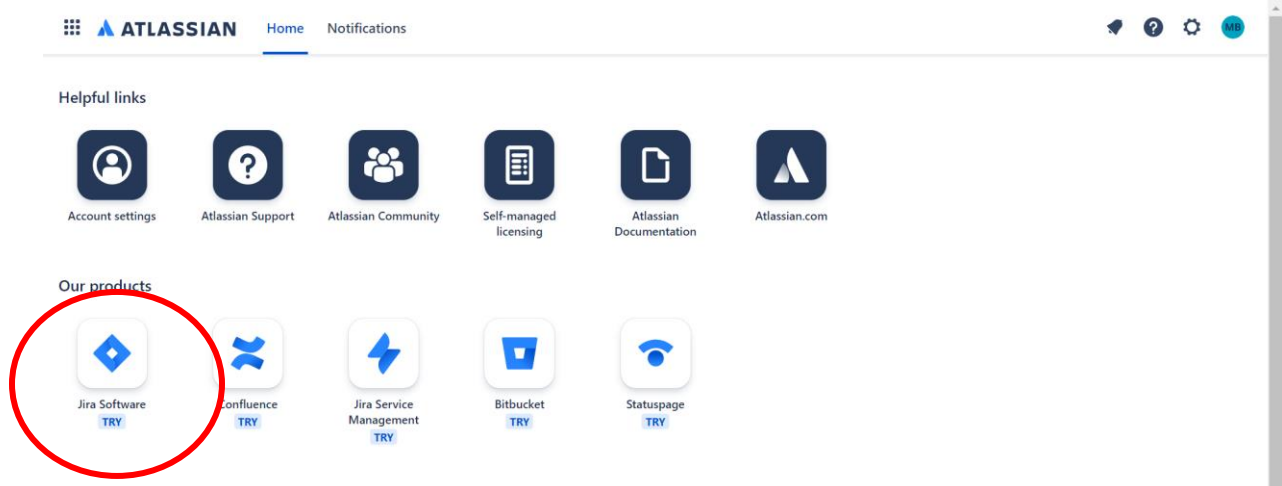
4. Click on "Get it Free".
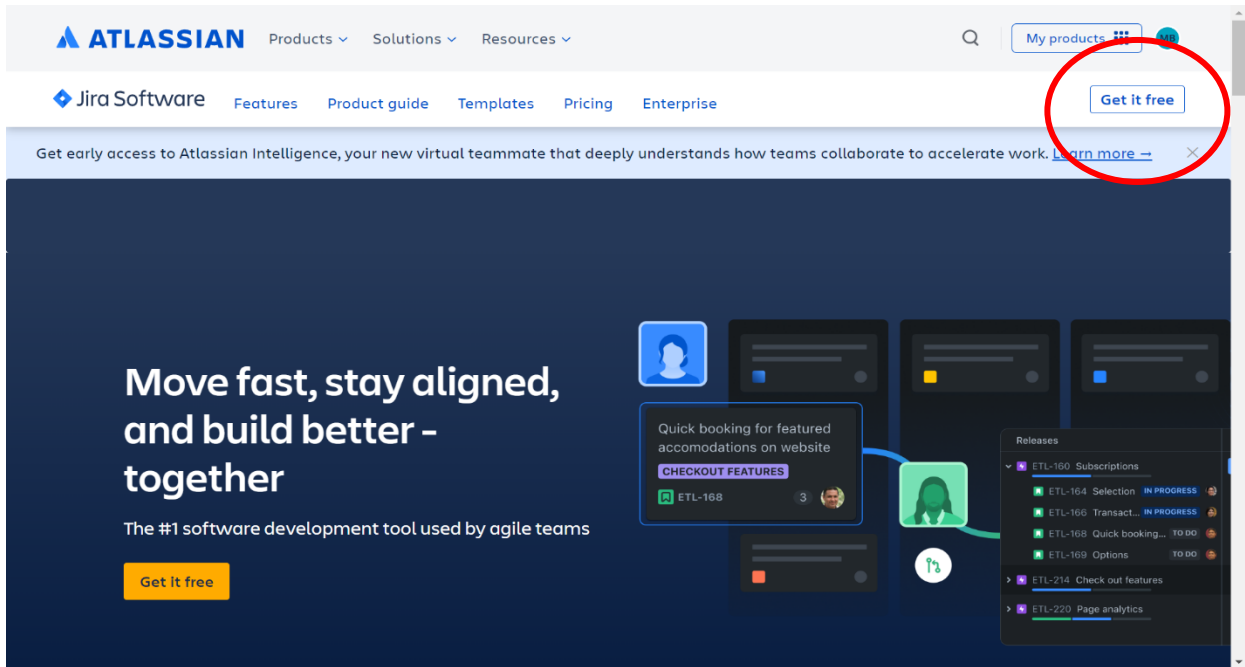
5. Enter your site name. [Your Enrolment Id]

6. Skip these options.

7. Select Scrum template. [do not select Kanban]

Select a template for your first project

If you're not sure what to choose, don't worry. You can quickly create a new project if this one's not right for you.

KANBAN
A simple board to visualize your workflow

A flexible and efficient way to manage agile work, with a board and timeline.

POPULAR

SCRUM
Deliver work in short, repeatable time blocks

Plan, prioritize, and schedule work using agile sprints with a backlog, board and timeline.

BUSINESS
Collaboration for business teams

Designed to help your business team collaborate and connect, with list and calendar views, forms, and more.

Jira Software   Jira Work Management

Next

8. Project setup completed. You will be on the Home page of your Scrum project.
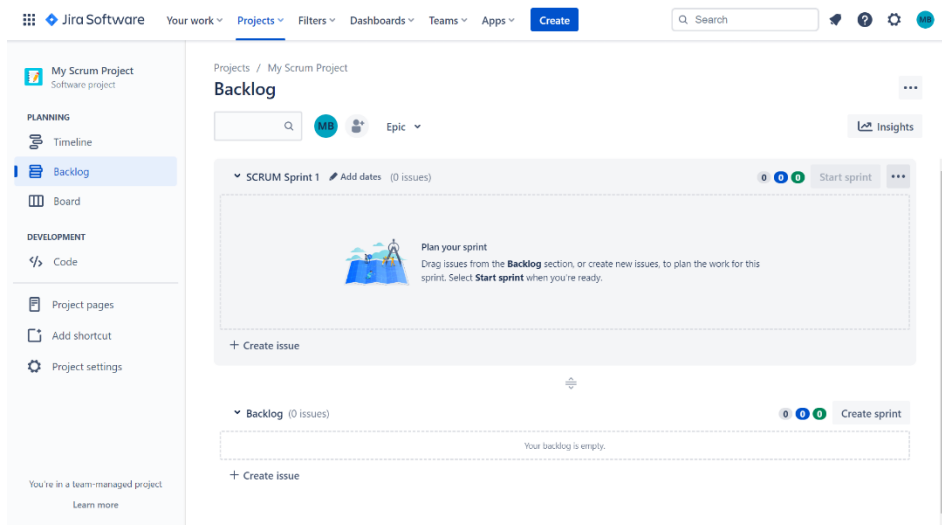
[Part 01 Completed.]

Part 02: Feed Requirements [Backlog, Epic, Story, Sub-task]

1. **Click on create Issue => Write the story text.**
   Feed all your stories and create the Backlog.

[**Your backlog section after feeding all the stories.**]

2. Epic Creation: Click on Epic Tab => activate Epic panel. => Click on create Epic.
   Create N number of Epics.

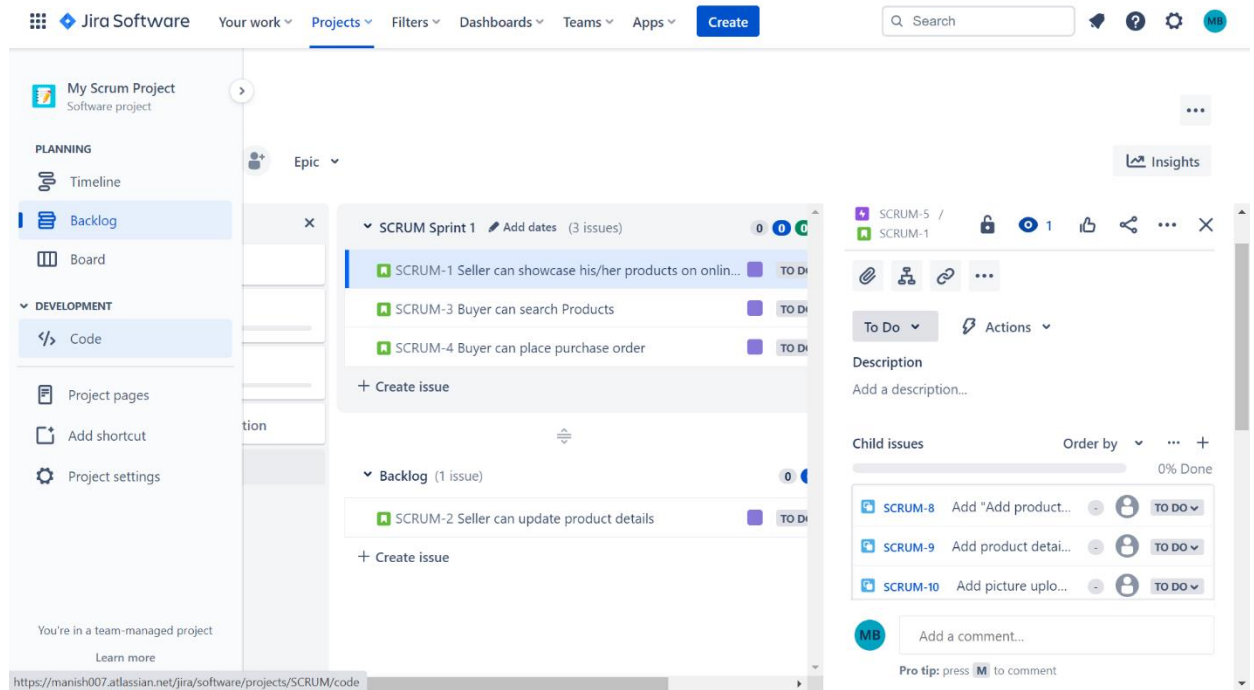### 3. Assign Stories to Epics: Drag stories towards the required Epic.

[All your stories will be tagged with the name of the assigned Epic]

4. Distribute stories into different Sprints.
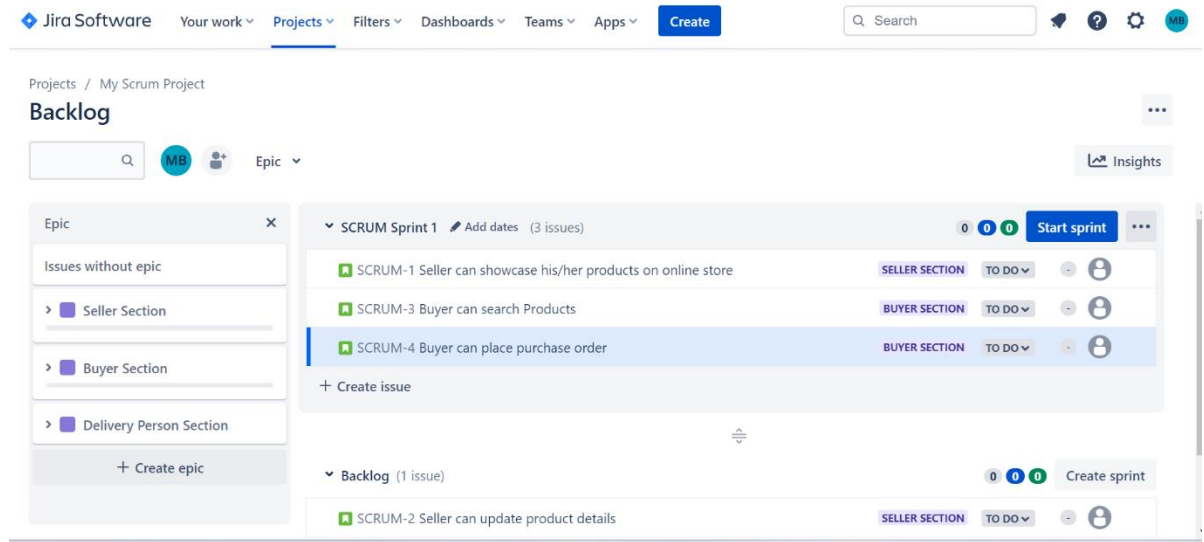
5. Add Sub tasks: Click on a particular story => A new panel will open=> Click on **add a child issue** => enter sub-task text. Add at least 3 sub task under each story.
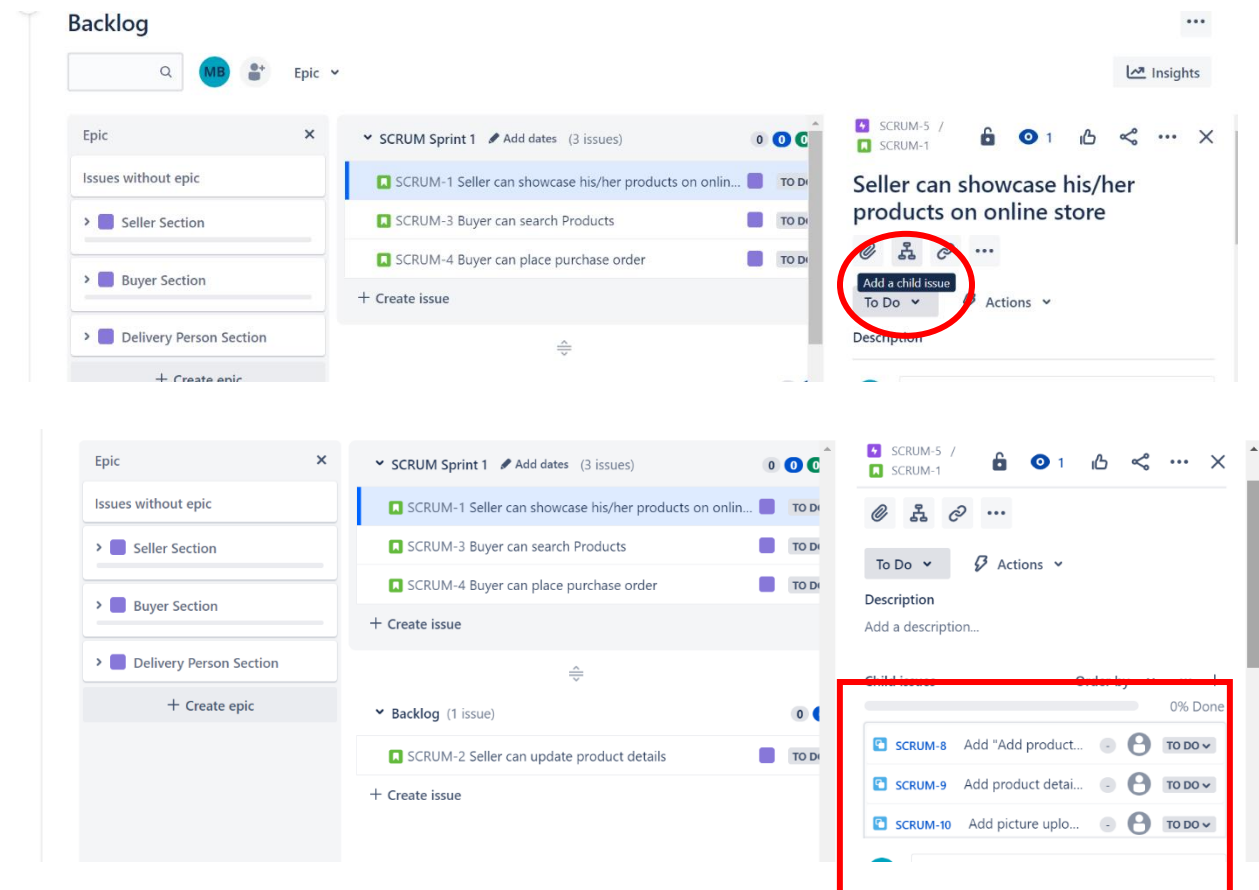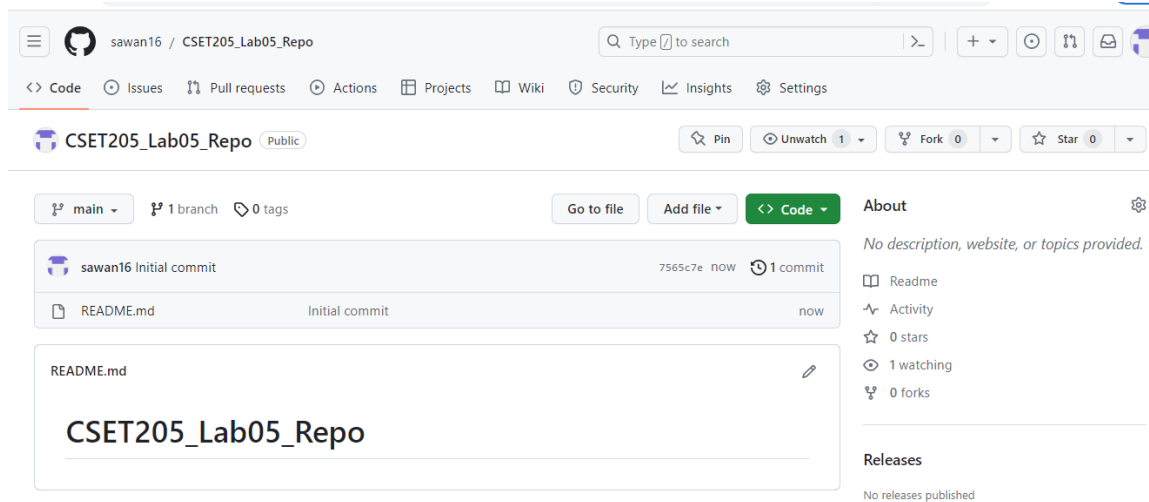
[After adding sub-tasks]

Add at least 2 Epics in your project.
Add at least 2 stories in each epic.
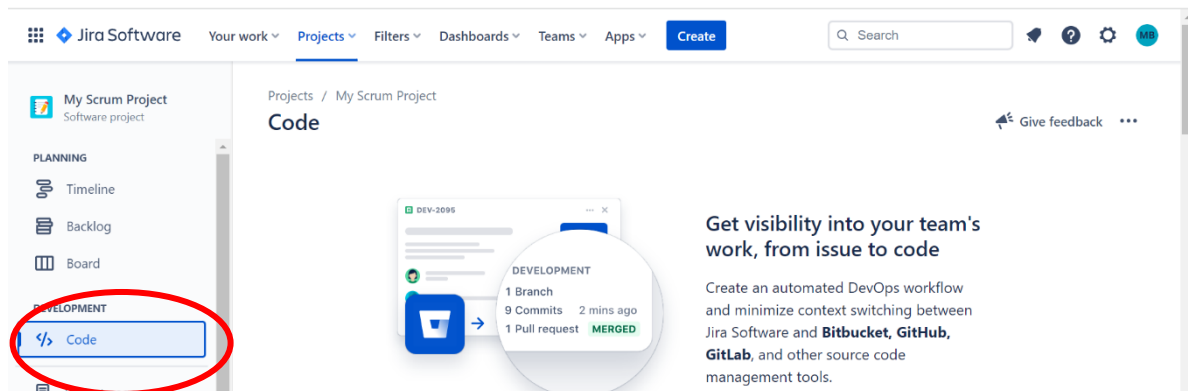**Add at least 3 sub-tasks in each story.**

[PART 02 Completed]

Part 03: Creating GitHub/ BitBucket repository and connect a separate branch with each story.

Before starting this part: Create a fresh GitHub repository: Repository name: <Enrolment_ID>_Lab_05
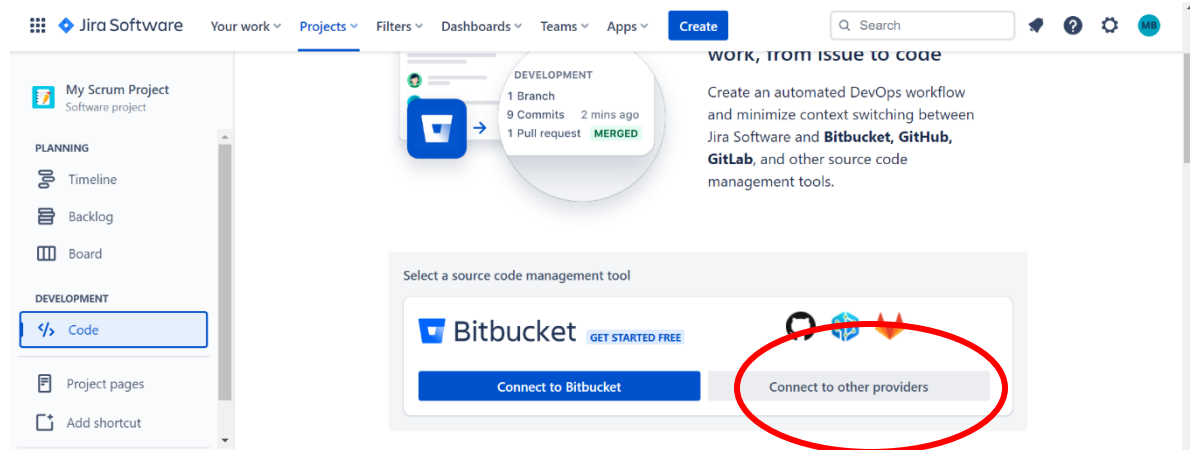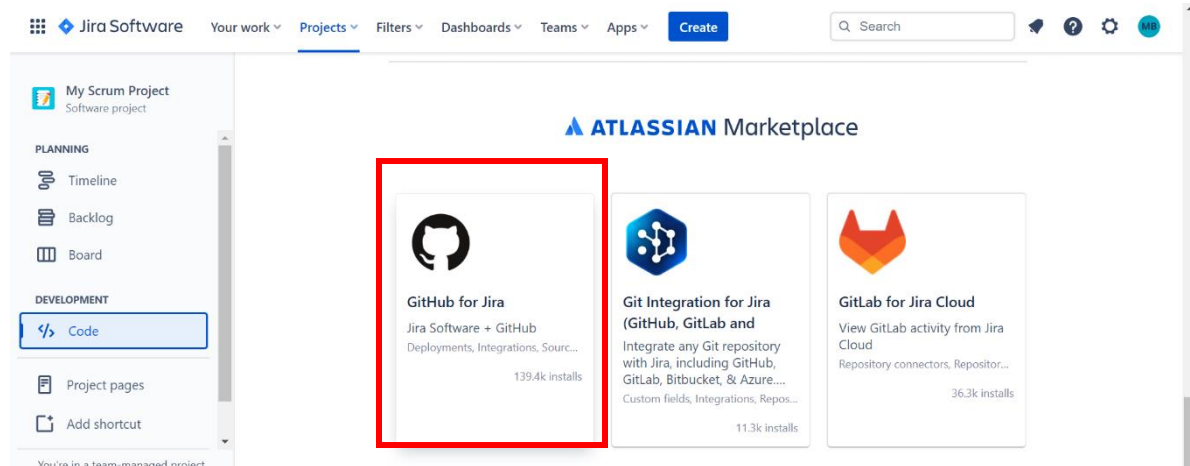
[My repository for the Part 03 demo]

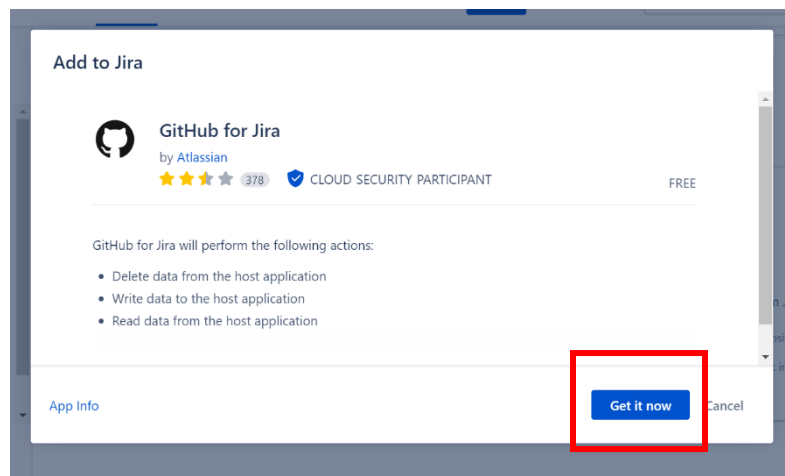**3.1:** Click on </> code => You will be on the Code Connection Setup Page.

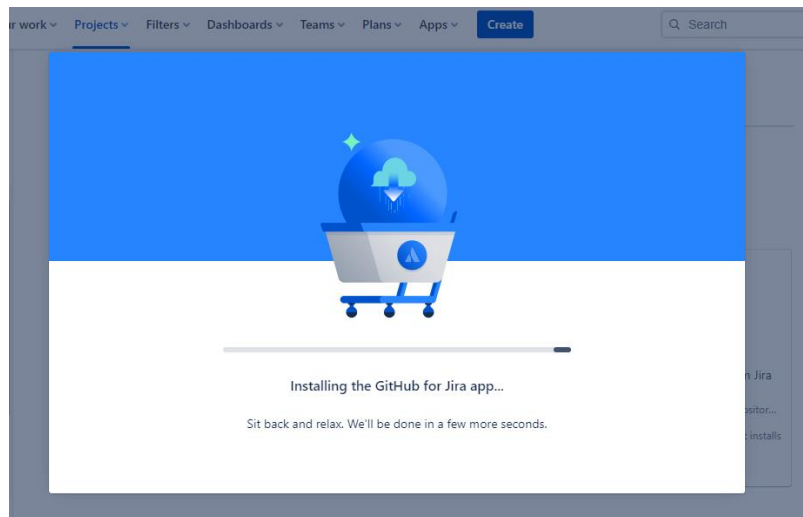**3.2 GitHub connection is demonstrated here. Choose Connect to other providers**
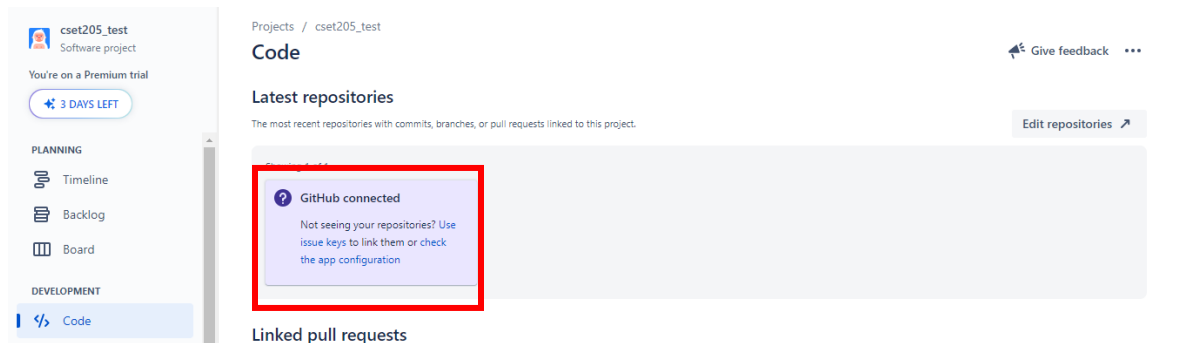

3.3 Select GitHub for Jira option.
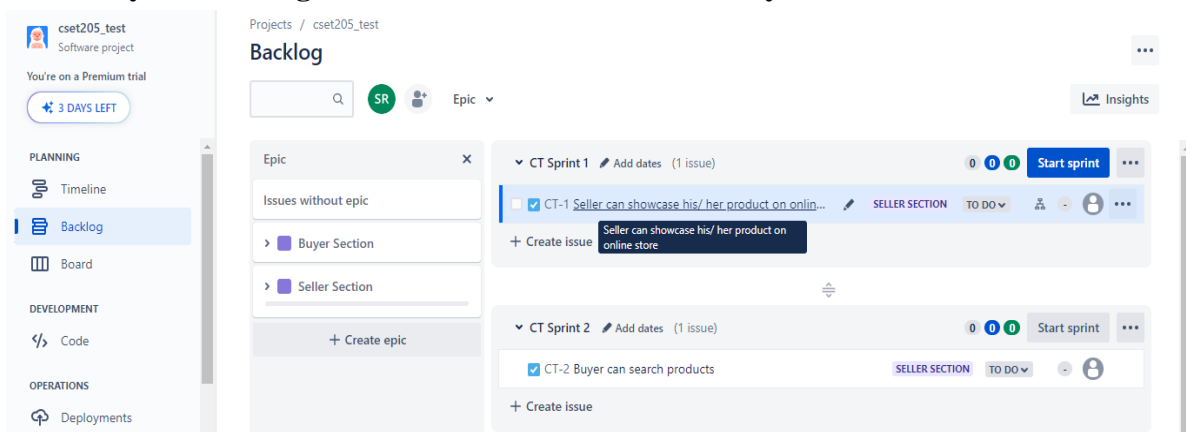

3.4 Click on Get it now.

[Now your Github App is connected to your Jira Project. But Its not Configured]
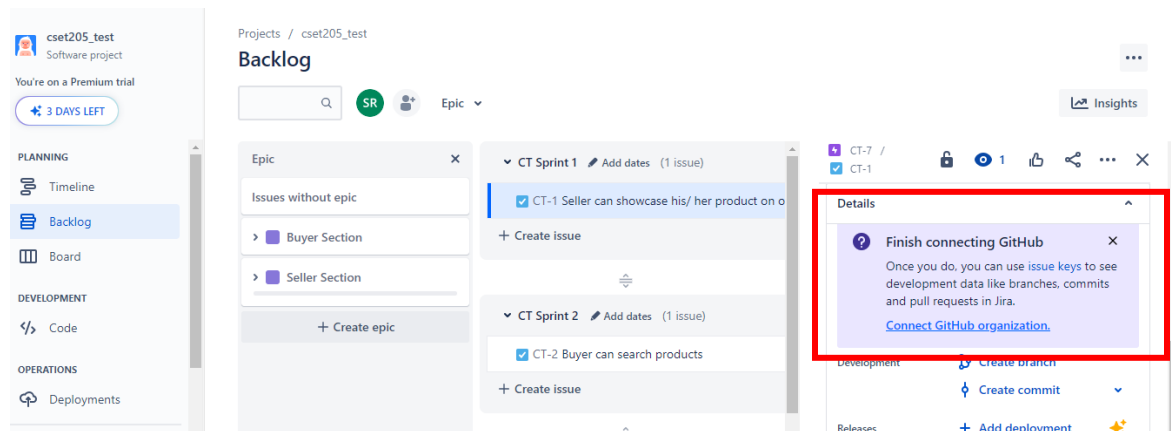

3.5 Now Go back to the Project. [Click on Projects option given in the top menu bar. => Select your project].
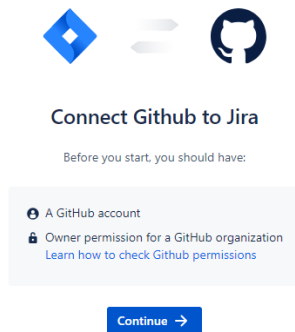
3.6 Go to your Backlog section. => Click on the first story.
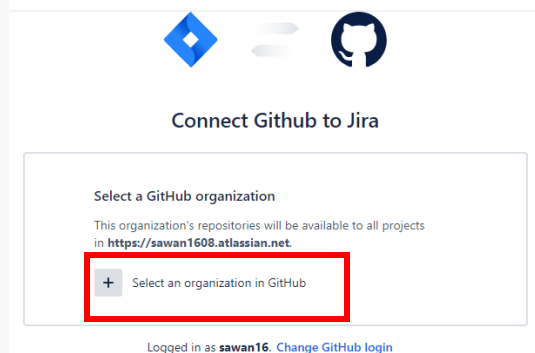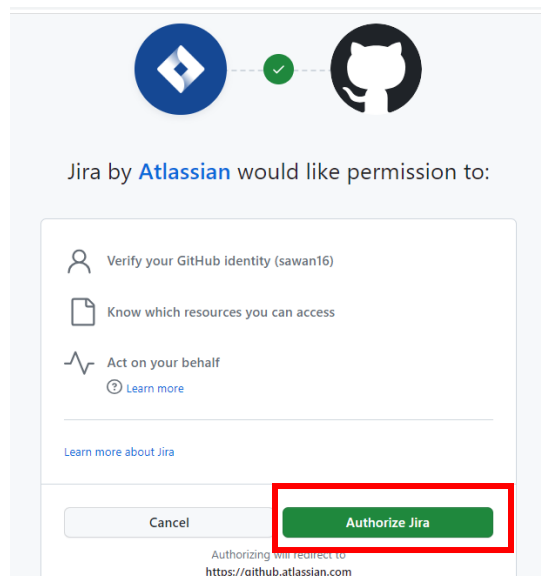
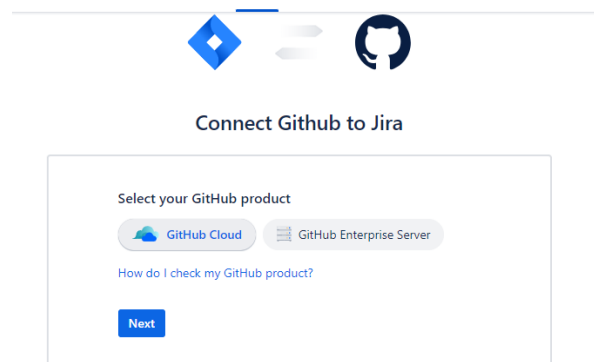**3.7 A new side panel will open => slide down =>**

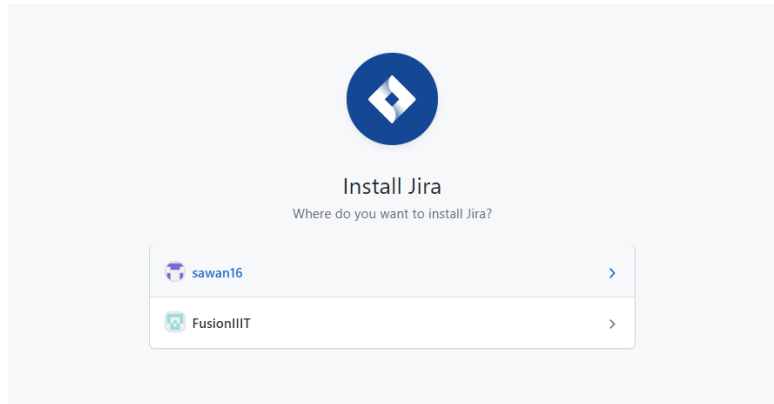**Click on Connect Github Organization**

3.8 Click on continue.

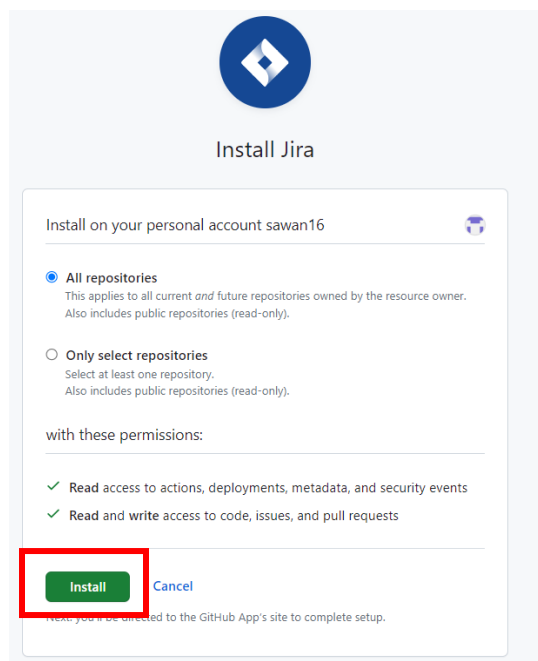**3.9 Click Next.**

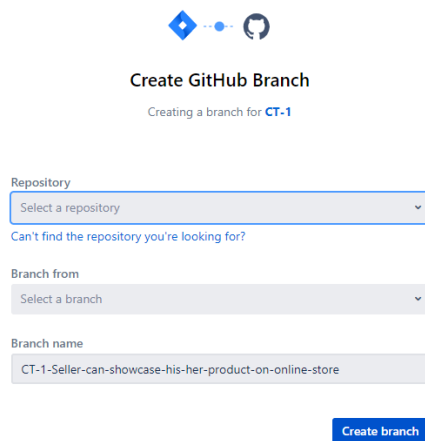### 3.10 Select your GitHub username.

3.11: click on Install.

3.12 Select Repository to connect with the Jira Project. [Select which you have just created] => Click on Create branch

Create GitHub Branch
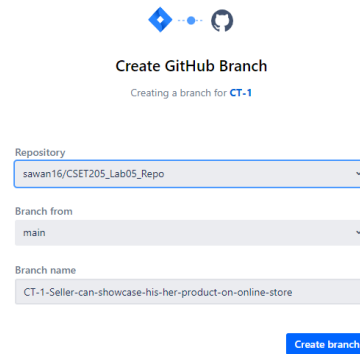Creating a branch for **CT-1**

Repository
Select a repository
Can't find the repository you're looking for?

Branch from
Select a branch

Branch name
CT-1-Seller-can-showcase-his-her-product-on-online-store

Create branch

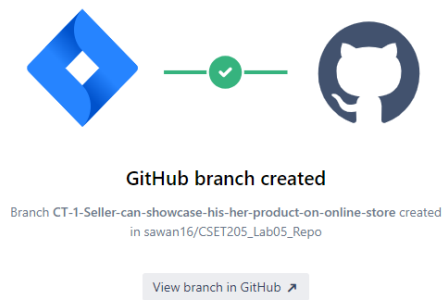Create GitHub Branch
Creating a branch for **CT-1**

Repository
sawan16/CSET205_Lab05_Repo

Branch from
main

Branch name
CT-1-Seller-can-showcase-his-her-product-on-online-store
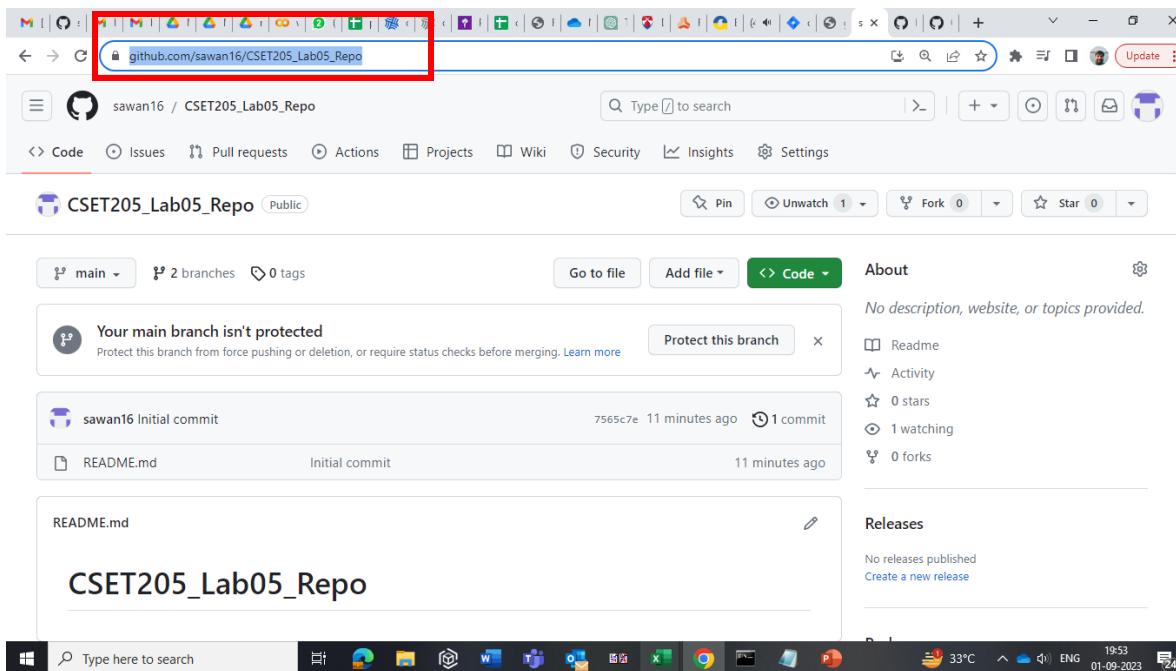
Create branch

A new Branch created for the story on Github Repository

GitHub branch created

Branch **CT-1-Seller-can-showcase-his-her-product-on-online-store** created
in sawan16/CSET205_Lab05_Repo

View branch in GitHub ↗

Varify the branch creation on GitHub.
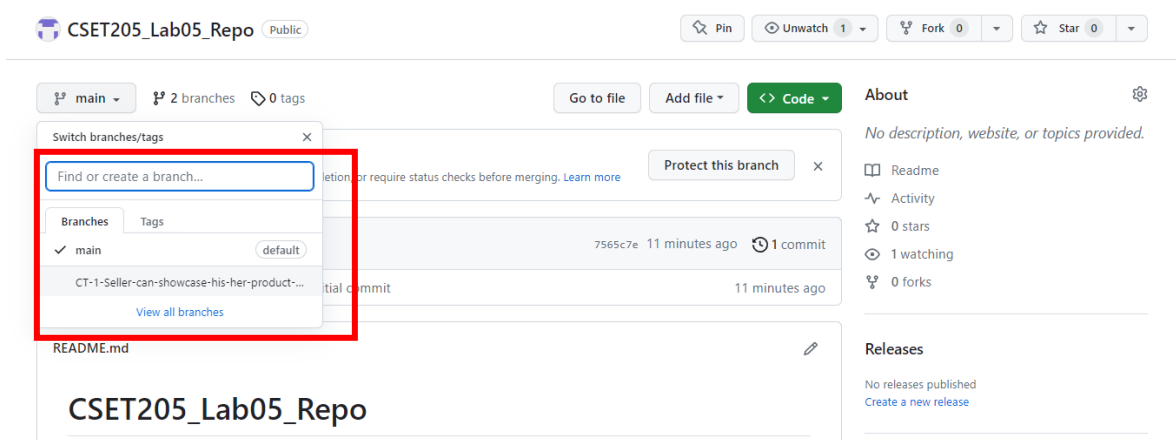
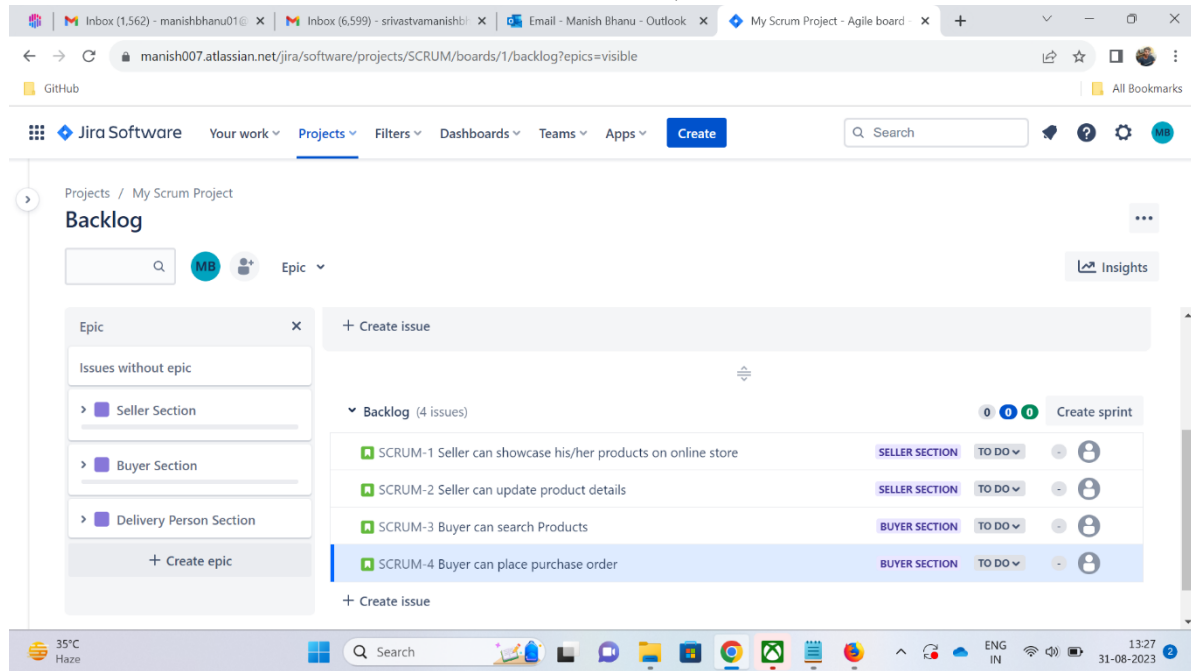## 3.13   Copy the Github Repositoy link for the submission purpose.

Submission:

1. **GitHub repository Link in a TXT file only.**

2. **Screenshot of the Backlog Page as shown below:**
   [All 4 stories connected with GitHub, must be visible in Screenshot]

3. **Word Files for each of the four stories connected with GitHub.**
   Follow these steps to download word files of the stories from Jira: