Oregon State University
Ecampus

CS361: Assignment 3: Project Plan & Sprint 1 Plan (for MVP)

Overview

Now that you've been introduced to the microservices concept, start planning your individual project. It's OK to change your plan later!

First, define the entire set of user stories for your individual project. The timespan for the user stories is this term but you don't have to finish implementing all the user stories this term. These user stories will need to go in a **Product Backlog** column/section/category of your task management system.

Next, move some of those user stories into a **Sprint Backlog**—these will be the user stories you WILL complete during this Sprint (for your minimum viable product) and comprise your **Sprint Plan**. **Note these minimum requirements for your MVP:**

- Has a way for users to interact (e.g., provide input, push buttons, etc.)
- Reflects CSH
- Reflects three quality attributes you choose
    - *Hint: If you choose "usability" or "inclusivity" as a quality attribute, your corresponding non-functional requirement can involve the CSH*

Instructions

Complete each item below by replacing the highlighted text (**Usability note**: double-click the text to select it).

1) **Task Management System**
   Choose a task management system based on the spike you did previously.
   Which task management system did you choose?

Jira

2) **Product Goal and Backlog**
   You'll be using *some* Scrum methods in this course. Unfortunately, the Scrum Master and Product Owner roles don't work well in this setting. You will, however, be experiencing Scrum Events and Artifacts.

   a) What is your **Product Goal** for your individual project?

Develop an application that gives a BUY/SELL recommendation for a given stock based off of technical analysis (TA) indicators.

The Scrum Guide (https://scrumguides.org/scrum-guide.html) doesn't give a detailed description of the Product Goal: "**describes a future state**", "**long-term objective**". Example Product Goal: "Develop software I can use to communicate with my dog when I'm on vacation."

b) In a **Product Backlog** column, section, or category of your task management system create **user stories** for your entire **individual project**. Use INVEST to guide you.
Requirements for user stories:

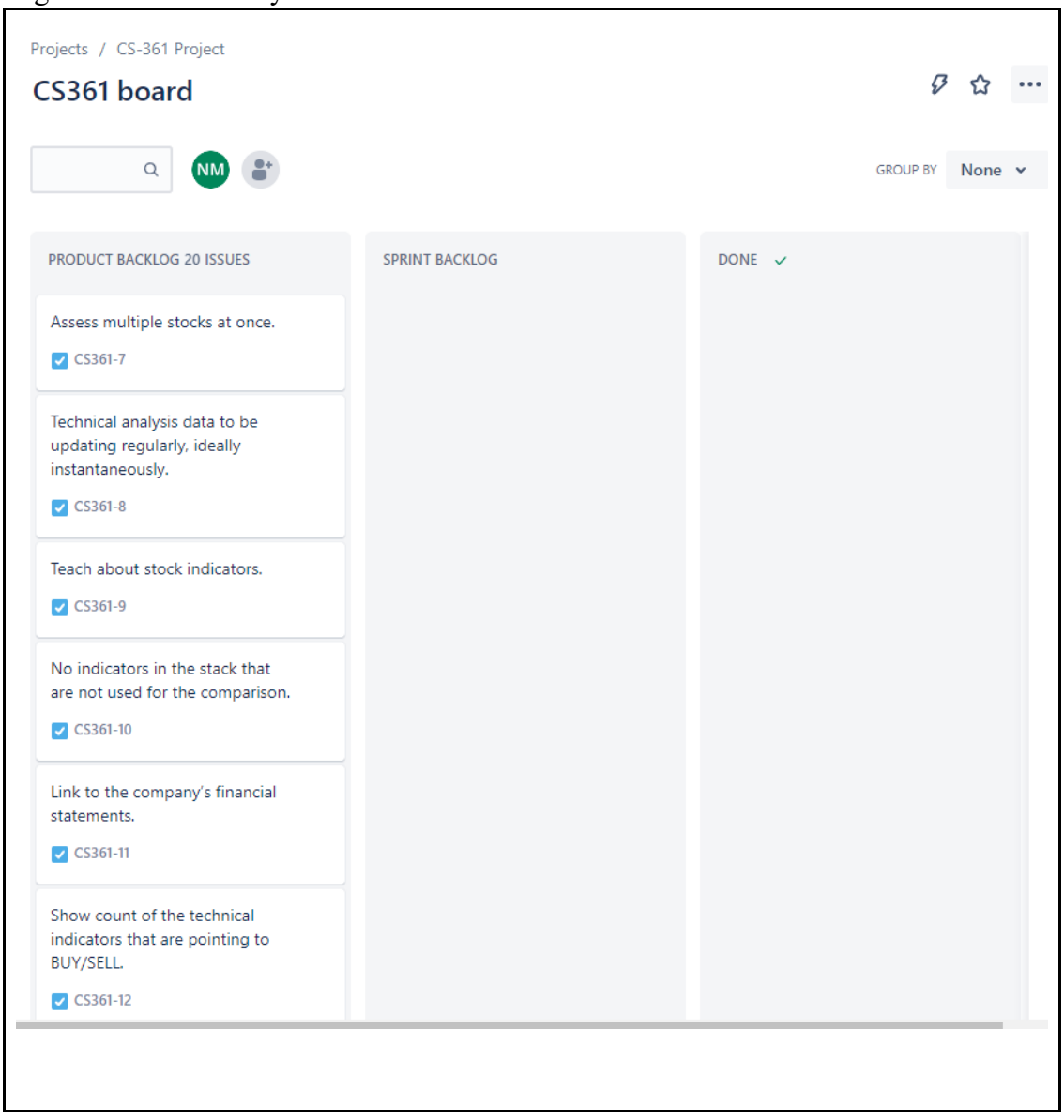
- Each has a **name**
- Each uses the **"As a… I want to… so that…" format** (see textbook)
- Total of at least **20** user stories (you will not have to implement all of these)
- As a set, must have **no obvious violations of INVEST**

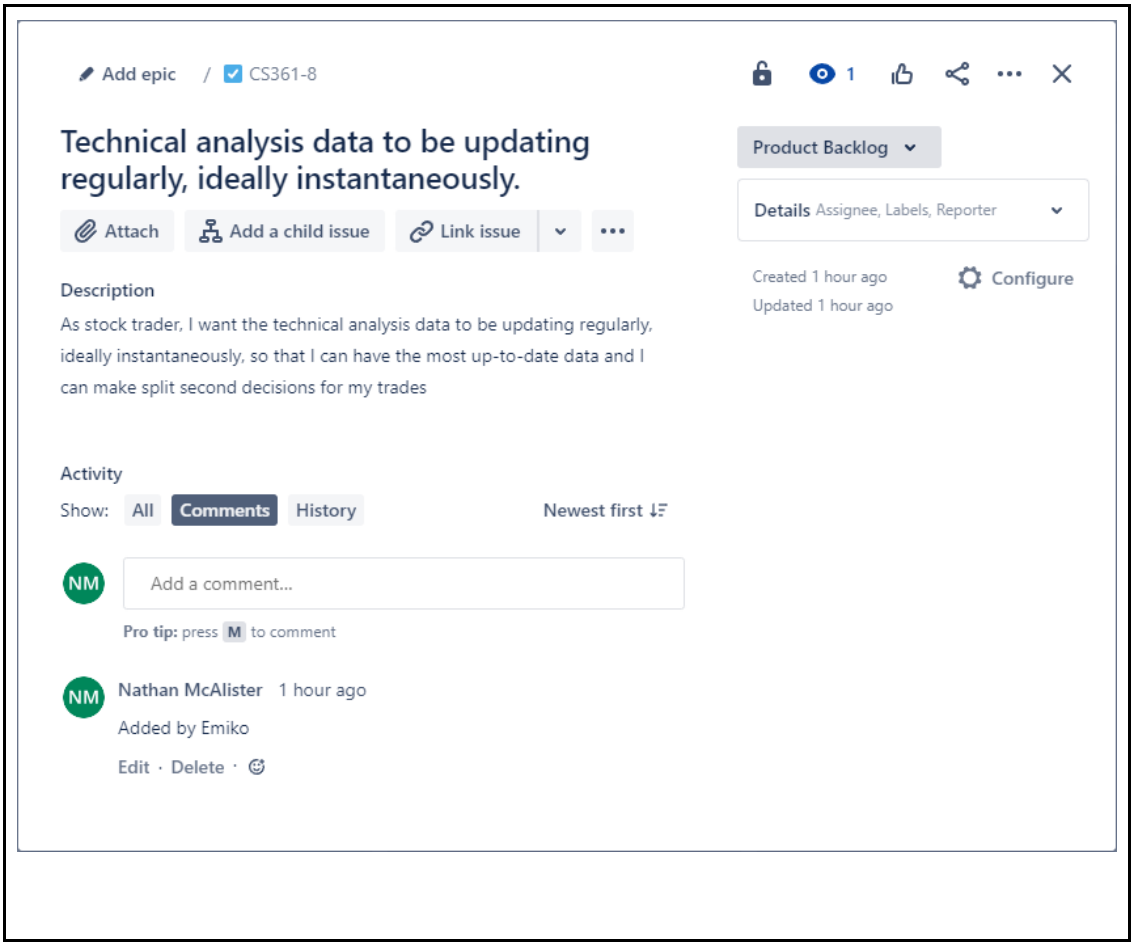
	Name	**As a… I want to… so that… format**
1	Charles	As a stock guru I want to be able to assess multiple stocks at once so I can make multiple decisions a day.
2	Emiko	As stock trader, I want the technical analysis data to be updating regularly, ideally instantaneously, so that I can have the most up-to-date data and I can make split second decisions for my trades.
3	Max	I am brand new to stock trading and I want a tool that can teach me about stock indicators so that I can learn more about stock technical analysis.
4	Chris	I am new to technical analysis and I don't want any indicators in the stack that are not used for the comparison so that I don't get confused on how the tool works.
5	Richard	As an avid user of technical analysis, I want to be able to have a link to the company's financial statements so that I can compare those to the BUY/SELL recommendations. This will give a more comprehensive look at the company.
6	Ivan	I am somewhat familiar with technical analysis and I want to be able to see a count of the technical indicators that are pointing to BUY/SELL so that I can see trend of indicators numerically.
7	Natasha	As an expert in stocks, I want to be able to see a trend of the technical indicators so that I can deep dive into each indicator.
8	Sarah	I am familiar with the stock market but new to technical analysis. I want a simple UI that will give me exactly what to do for a given stock so that I don't have to think much and can make long-term investment decisions.

9	Ami	As someone with extensive background in stock purchases I want to be able to see the BUY/SELL criteria for each technical indicator so that I can weigh each one individually.
10	Sian	As someone who is semi-familiar with the stock market, I want to have a clean UI that color coordinates the BUY/SELL indicators so that it is easy to understand each indicator
11	Tom	I am proficient with technical analysis and want to be able to adjust the weighting for each indicator before making the BUY/SELL recommendation.
12	Alex	As someone new to stock trading I want to be able to have a concise indicator that tells me if I should buy a stock.
13	Parteek	I have been trading stocks on technical analysis for a few months and I want a tool that can display individual values of the technical indicators.
14	Aubrey	As a visual minded person, I want to see the stock trend and be able to overlay the indicator information so that I can see how the indicators are changing over time.
15	Ryan	I have been doing technical analysis for years and want to be able to adjust the number of indicator and remove the indicators that I don't find valuable so that I can make custom BUY/SELL recommendations.
16	Lauran	As a new investor, I want a tool that is sleek and minimalist and easy to use, like Robinhood so that I don't get bogged down in a lot of unnecessary details.
17	Lando	As someone that is extremely comfortable with technical analysis, I would like the tool to add the functionality of moving averages, along with the technical indicators, so that I can have more data available to make decisions.
18	Daniel	I have been working with technical indicators for a few months and would like to see the BUY/SELL criteria for each indicator, so that I can see how close the indicator is to the BUY/SELL point.
19	Katy	As someone that is trying to learn more about technical analysis, I would like for the tool to open links to various websites that describe the math behind the technical indicators.
20	Eli	As someone completely new to technical analysis I

		want to still be able to see the stock ticker and price so that I can relate the technical analysis values back to the stock price.

Enter these user stories into your task management system. Take a **screenshot** so that the grader can confirm you added the stories.





3) **Non-Functional Requirements**
Select the top three quality attributes you care about for your individual project. See https://en.wikipedia.org/wiki/List_of_system_quality_attributes for ideas. Convert them into **non-functional requirements**.

a) **Which three quality attributes** did you choose?

Reliability
Memorability
Flexibility

b) **Why did you choose these quality attributes**? Ex: How are they relevant to your end user? How are they relevant to your Product Goal? (1+ sentence per quality attribute)

Quality attribute	**Why it's relevant to YOUR project**
Reliability	Any time you are dealing with the stock market, or money in general, you want the data to be as reliable as possible. You want the data to be up-to-date and accurate because people are going to be using your product to make financial decisions.
Memorability	Because the user base has a large difference in

	knowledge, beginning users need to not be scared off by a complex tool. The technical analysis tool needs to be easy for a novice to pick-up and start using almost instantly.
Flexibility	Because the user base has a large difference in knowledge, the tool needs to accommodate both beginners and experts in the field of technical analysis. The program should be lightweight and easy to use for the novices, educational for the intermediates, and highly customizable for the experts.

c) Convert your quality attributes to non-functional requirements. Must be **testable**. **What are your three non-functional requirements? How would you test them?** (1+ sentence each)

Quality Attribute 1	Reliability
Non-functional requirement 1	Gathering the technical analysis data for a stock is completed upon 99.99% of GET calls.
How you would test that the non-functional requirement is satisfied	Monitor the number of GET calls and the number of responses with status '200 OK'

Quality Attribute 2	Memorability
Non-functional requirement 2	Users require no more than 3 operations of the application before they have mastered the basic function of looking up a stock and viewing the technical analysis criteria.
How you would test that the non-functional requirement is satisfied	Hold focus testing groups prior to product launch and ask users for feedback on how long it took them to understand the basic functions of the tool. After product launch, a survey will be sent to product owners to ask about the memorability (among other things) of the product.

Quality Attribute 3	Flexibility
Non-functional requirement 3	Satisfaction with product features will be 70% for novices and 40% for experts.
How you would test that the non-functional requirement is satisfied	Measure satisfaction of product features in focus testing groups prior to product launch and ask users for feedback on the basic and advanced features of the product. After product launch, a

	survey will be sent to product owners to ask about the satisfaction with the basic and advanced feature of the product.

4) **Sprint 1 Plan (for MVP)**

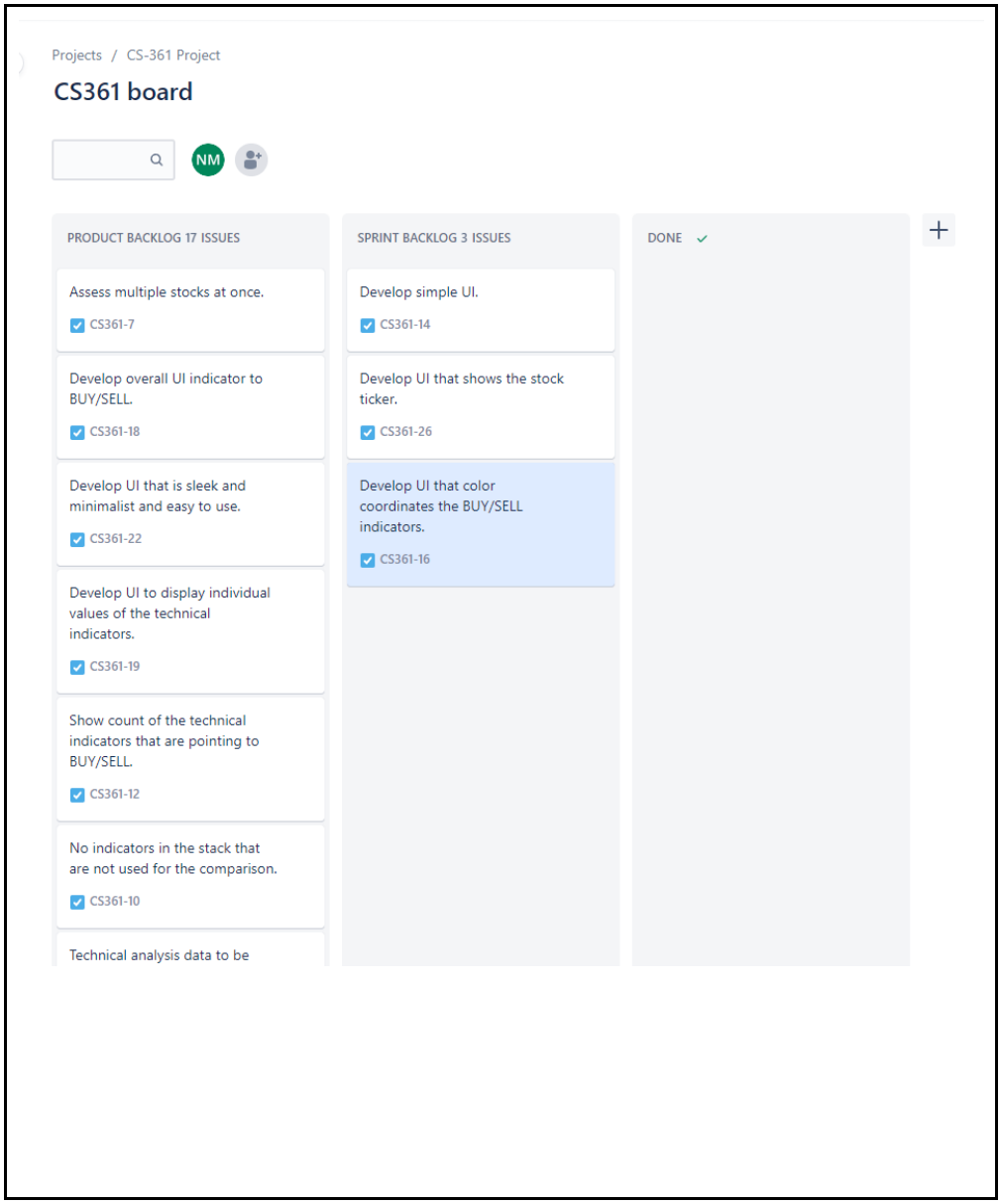
a) What is your **Sprint Goal**?

Develop a paper prototype of the UI.

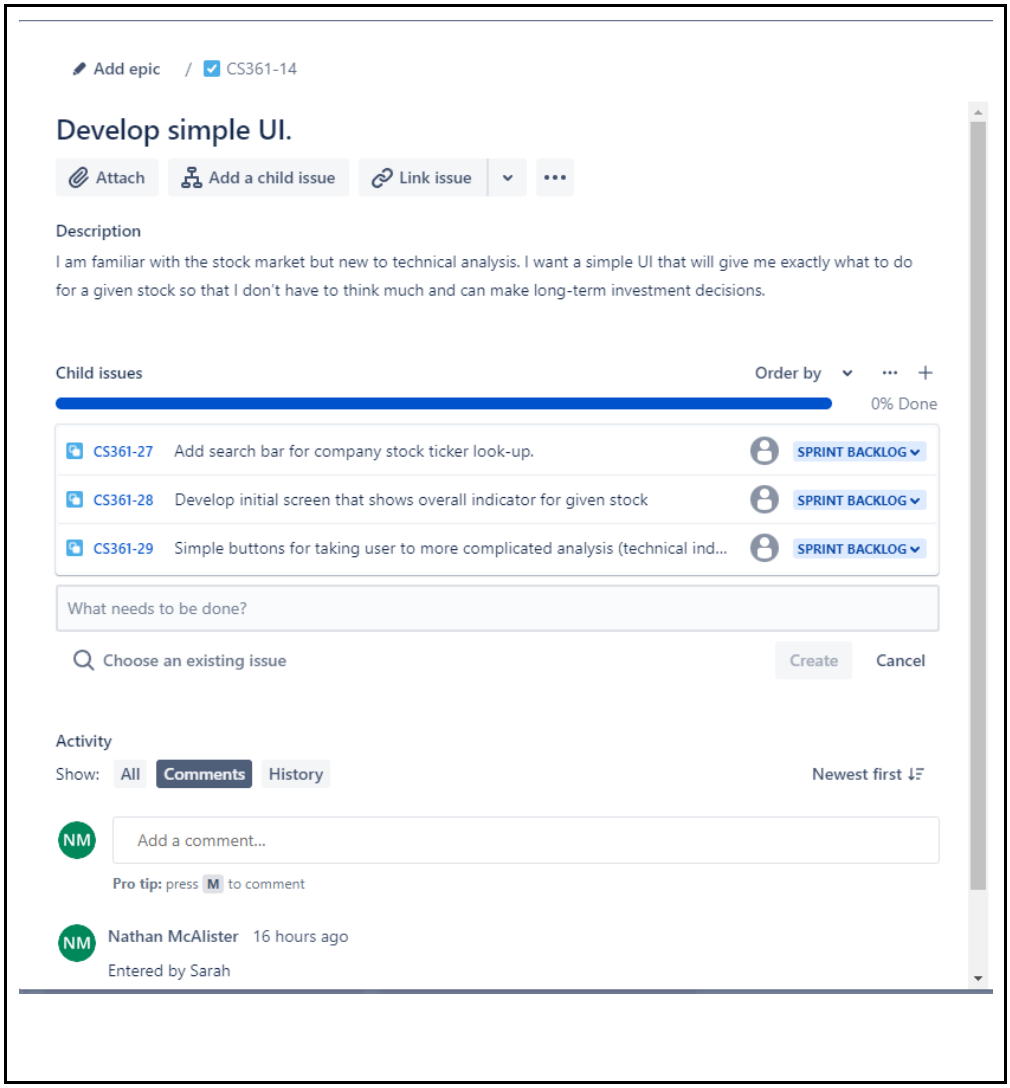
b) Next, select user stories from your Product Backlog and move them to your **Sprint Backlog**. Choose what you think you can complete, but recall the minimum requirements (see Overview). Which user stories did you select?

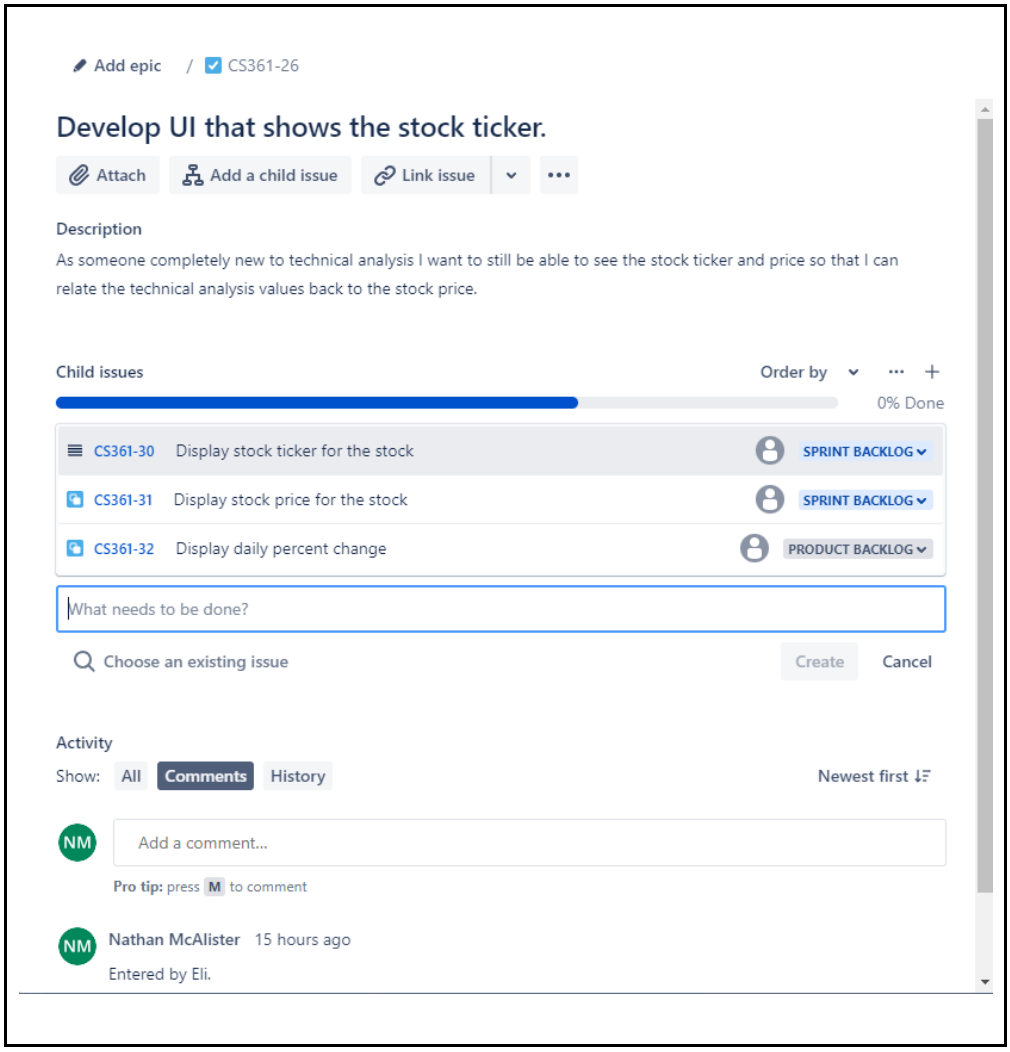
I am familiar with the stock market but new to technical analysis. I want a simple UI that will give me exactly what to do for a given stock so that I don't have to think much and can make long-term investment decisions.
As someone completely new to technical analysis I want to still be able to see the stock ticker and price so that I can relate the technical analysis values back to the stock price.
As someone who is semi-familiar with the stock market, I want to have a clean UI that color coordinates the BUY/SELL indicators so that it is easy to understand each indicator.

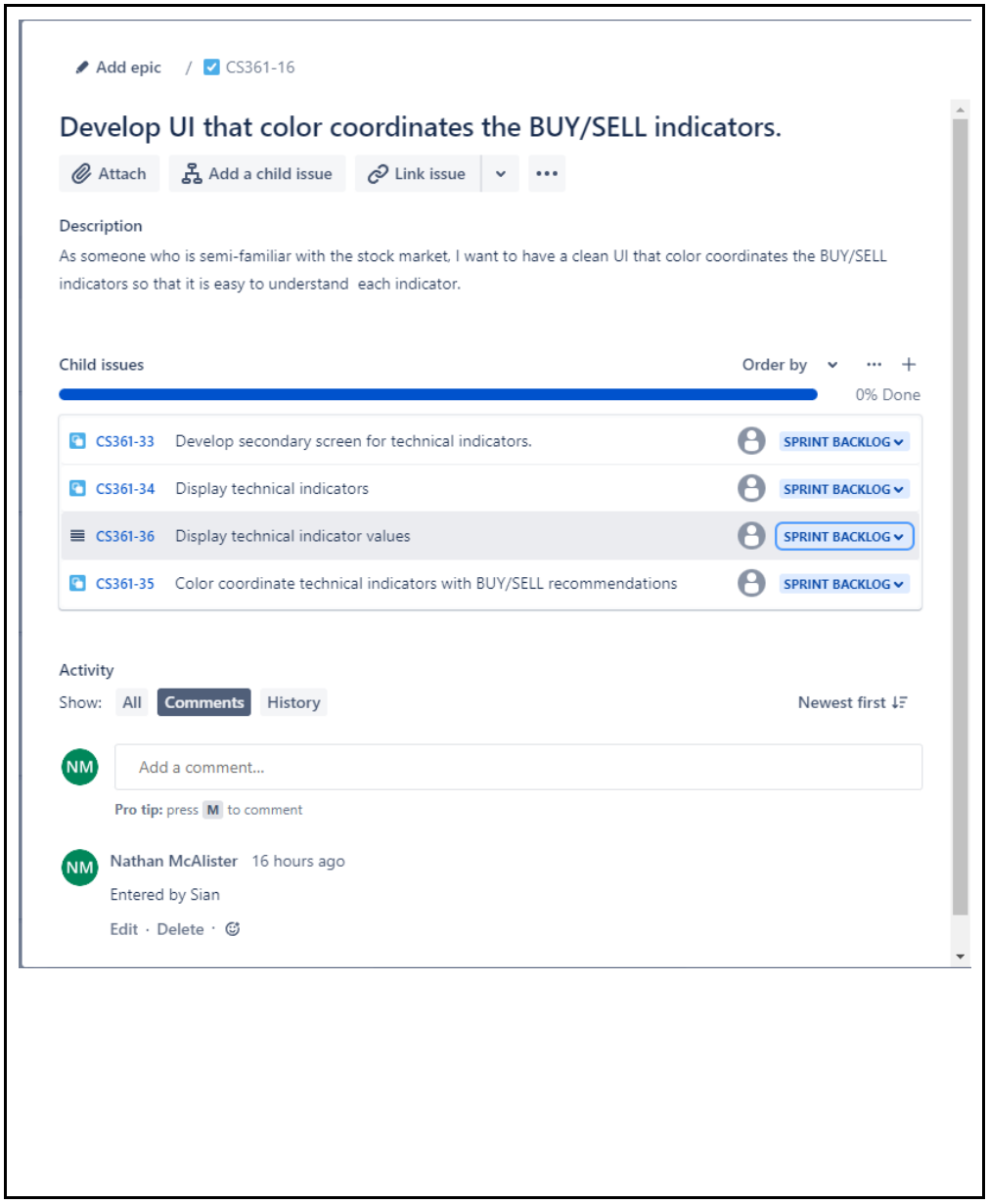
c) Take a **screenshot** that shows you've moved these user stories into a **Sprint Backlog** in your task management system.



d) Now that you've selected your Sprint user stories, you will define several tasks for each user story—the tasks you'll need to complete to complete the user story. Add tasks to each user story and take **screenshots** showing each user story's tasks in your task management system. **Note**: It might work best to make your user story a task and your tasks subtasks of the user story.


Add epic / CS361-14
Develop simple UI.
Attach
Add a child issue
Link issue
Description
I am familiar with the stock market but new to technical analysis. I want a simple UI that will give me exactly what to do for a given stock so that I don't have to think much and can make long-term investment decisions.
Child issues
Order by
0% Done
CS361-27 Add search bar for company stock ticker look-up. SPRINT BACKLOG
CS361-28 Develop initial screen that shows overall indicator for given stock SPRINT BACKLOG
CS361-29 Simple buttons for taking user to more complicated analysis (technical ind... SPRINT BACKLOG
What needs to be done?
Choose an existing issue
Create
Cancel
Activity
Show: All Comments History
Newest first
NM
Add a comment...
Pro tip: press M to comment
NM
Nathan McAlister 16 hours ago
Entered by Sarah


Add epic / CS361-26
Develop UI that shows the stock ticker.
Attach
Add a child issue
Link issue
Description
As someone completely new to technical analysis I want to still be able to see the stock ticker and price so that I can relate the technical analysis values back to the stock price.
Child issues
Order by
0% Done
CS361-30 Display stock ticker for the stock SPRINT BACKLOG
CS361-31 Display stock price for the stock SPRINT BACKLOG
CS361-32 Display daily percent change PRODUCT BACKLOG
What needs to be done?
Choose an existing issue
Create
Cancel
Activity
Show: All Comments History
Newest first
NM
Add a comment...
Pro tip: press M to comment
NM
Nathan McAlister 15 hours ago
Entered by Eli.



e) Lastly, you'll need a **Definition of Done** for each user story. Figure out where to put this on your user story task in your task management system (e.g., in the task's description area).

Requirements for each Definition of Done:

- Placed with its user story
- Has at least four acceptance criteria
- Acceptance criteria should include checking that your **non-functional requirements** are met
- Acceptance criteria use the "Given… when…" format

Enter your Definitions of Done below and in your task management system.

User Story Definition of Done 1

Which **user story** is this Definition of Done for?

I am familiar with the stock market but new to technical analysis. I want a simple UI that will give me exactly what to do for a given stock so that I don't have to think much and can make long-term investment decisions.

What is its **Definition of Done**?

Acceptance criterion	**For which quality attribute (if any)?**
Given the user using the search bar when they type a company name the stock ticker auto fills.	Memorability, Flexibility
Given the user finds the company they want to search for when viewing the BUY/SELL indicator the indicator displays a "one-word" BUY/SELL recommendation.	Flexibility
Given the user finds the stock they want to view when the data is retrieved from the database it is accurate and up-to-date.	Reliability
Given the user doesn't want to be bombarded with information when viewing the initial page all technical analysis details will be hidden behind secondary buttons.	Memorability, Flexibility

User Story Definition of Done 2

Which **user story** is this Definition of Done for?

As someone completely new to technical analysis I want to still be able to see the stock ticker and price so that I can relate the technical analysis values back to the stock price.

What is its **Definition of Done**?

Acceptance criterion	**For which quality attribute (if any)?**
Given the program retrieves the stock ticker and price information when the data is retrieved from the database it is accurate and up-to-date.	Reliability
Given the user wants more detailed information about the stock when hovering over the stock ticker, more detailed information is displayed about the company.	Flexibility
Given the user finds the stock they want to view when the data is displayed it is concise and doesn't overshadow the BUY/SELL indicator (relatively small compared to the indicator).	Memorability
Given the user finds the stock they want to view when the data is displayed it is concise and doesn't give too much information (trading volume, open/close numbers, averages, etc.)	Memorability

User Story Definition of Done 3

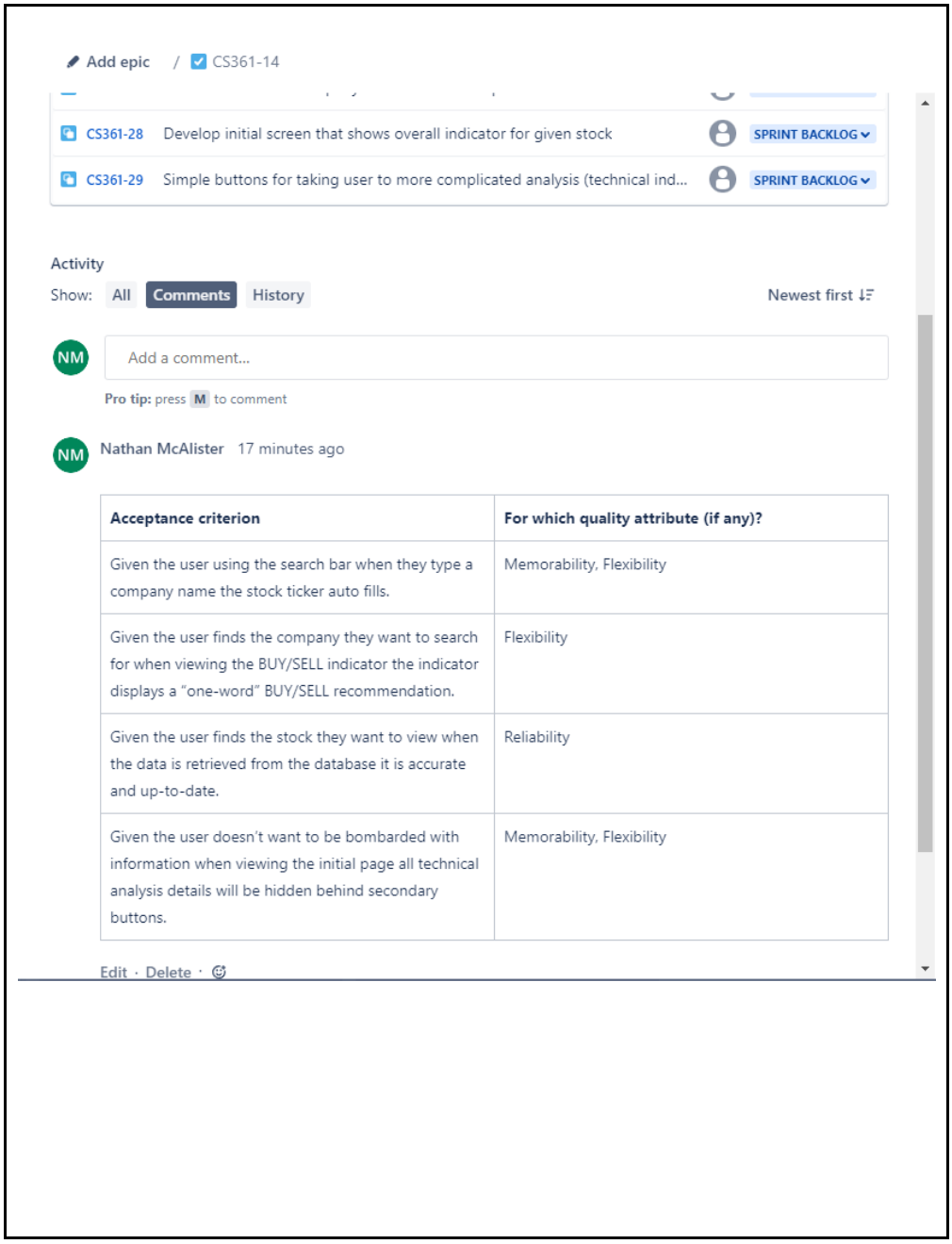
Which **user story** is this Definition of Done for?

As someone who is semi-familiar with the stock market, I want to have a clean UI that color coordinates the BUY/SELL indicators so that it is easy to understand each indicator.

What is its **Definition of Done**?

Acceptance criterion	**For which quality attribute (if any)?**
Given the user is displayed the BUY/SELL criteria on the main page when view the graphic the BUY/SELL indicators should be color coded (Green = Buy, Grey = Neutral, Red = Sell).	Memorability, Flexibility
Given the user wants to view the detailed technical information when viewing the initial screen, the technical details table should be hidden behind a button.	Memorability
Given the user is displayed the BUY/SELL criteria on the secondary page when view the technical analysis data, the data should be color coded (Green = Buy, Grey = Neutral, Red = Sell).	Memorability, Flexibility
Given the program retrieves the technical analysis information when the data is retrieved from the database, it is accurate and up-to-date.	Reliability

Take a **screenshot** of at least one user story's Definition of Done in your task management system for your grader to confirm.



Now that you have a plan, begin implementation!

Submission

PDF or Word format via Canvas.

Grading

You are responsible for satisfying all criteria listed in the Canvas rubric for this assignment. You will be able to revise this assignment if you miss points.

Questions?

Please ask via Ed so that others can benefit from the answer.