User Stories

A ***user story*** is a tool used in Agile software development to capture a description of a software feature from an end-user perspective. The user story describes the type of user, what they want and why. A user story helps to create a simplified description of a requirement.

A user story is best written using the following format:

As a <role>, I want <feature> so that <reason>.

Examples of user stories are provided below:

- *As a **user**, I want **to upload photos** so that **I can share photos with others**.*
- *As an **administrator**, I want **to approve photos before they are posted** so that **I can ensure that they are appropriate**.*

A user story should be short, and is usually written on a sticky note or an index card. They should be written in the language of the customer so that it can be understood by them easily.

After the user stories are written, the team will then estimate the overall effort that will be required to fully implement the user story. The estimates are expressed in terms of ***story points***. Each story is assigned a story point in such a way as to reflect the relative effort required to complete the stories. For example, a story that is assigned a 2 should require twice as much effort as a story that is assigned a 1. As the story points represent the effort to develop a story, a team's estimate must include everything that can affect the effort. This may include:

- The amount of work to do
- The complexity of the work
- Any risk or uncertainty in doing the work

<u>Question</u>

You have been approached by a marathon organizer to develop an application for them to manage their marathon events. Working in teams of 4 – 5 members,

a. Brainstorm and write user stories for the application that you have been commissioned to develop. [Timebox: 10 minutes]

b. Play Planning Poker to estimate the story points for your user stories. Use the "Power of 2" (i.e. 1, 2, 4, and 8) for the story points. [Timebox: 10 minutes]

c. Create a project on Pivotal Tracker (refer to **Appendix A** on how to use Pivotal Tracker) and add your stories there. [Timebox: 20 minutes]
   - Assign 1 member to create the project. This member should then invite the other team members to the project.
   - Team members can then collaboratively add the stories to the project.
   - Try to export/import the stories in CVS format.

Appendix A Agile Project Management Tool: Pivotal Tracker

Pivotal Tracker is an agile project management tool that shows software teams their work in progress and allows them to track upcoming milestone. The software can be accessed at http://www.pivotaltracker.com. You may access some tutorial on how to use this software at the following URL https://www.pivotaltracker.com/help/articles/quick_start/.

Sign Up for Pivotal Tracker account

1. Sign up for a new Tracker account by clicking **Sign Up** at the top right of a Tracker page.

2. Provide name, email and company (any name). Your account will be on **Free Plan**, which allow up to two private projects, 2GB of file attachment storage, and three collaborators (including yourself).

   Important: Your account will be **free trial account** which will be **expired in 30 days** if you fail to indicate company.

3. When you sign up for Tracker an account and **Tracker login** will be created for you by default, using the information you provided on the sign-up form.

4. Accounts in Tracker are different than individual user logins.

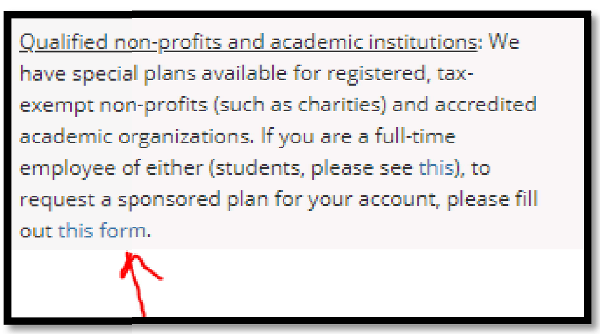
5. A user's **login** is always associated with an individual, and includes their email address, a unique username, and their private password. A login can own or be a member of **one or more accounts**.

6. Sponsored (Free) plans are available for qualified, tax-exempt nonprofit organization, as well as accredited **academic institutions and educators**. They include unlimited private projects.

7. **Sign in** to Tracker. Click on **Accounts** under your username at the top right of Tracker.

8. Click **Manage Account** on the account for which you'd like to request academic plan, than go to the **Plans & Billing** page.

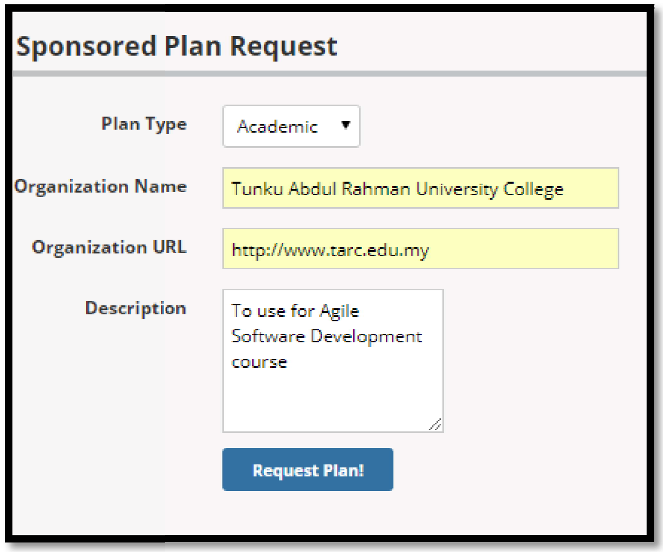
9. At the bottom of the account's **Plans & Billing** page, under the plans list, click **this form** link under **Qualified nonprofits and academic institutions**.



Qualified non-profits and academic institutions: We have special plans available for registered, tax-exempt non-profits (such as charities) and accredited academic organizations. If you are a full-time employee of either (students, please see this), to request a sponsored plan for your account, please fill out this form.

10. In the form, please let them know what type of plan you're requesting (e.g., academic or nonprofit), the name of your organization, its URL, and a brief description of how you plan to use Tracker.

11. You'll receive an email when they process your request, typically within 5–7 business days.



Quick Guide on how to use Pivotal Tracker

1. Creating a project

- Sign up for the new account
- Create a new project and set the necessary properties/setting for the project
- Explore all the panels
- Pivotal Tracker projects consist of 4 different lists: **icebox, backlog, current, and done.**
  - **Icebox** – the place where you enter all your features /user stories throughout the project. This means that any new story goes to the icebox first. The product owner can then decide and prioritize.
  - **Backlog**- your real workspace. Stories which you and your team would like to tackle first are moved from the icebox to the backlog. The higher the story is in the backlog list, the sooner you'll start working on it.
  - **Current** - the list of stories the team is working on this week (i.e. the current iteration/sprint).
  - **Done**–the list of stories that have been accepted by the Product Owner.

2. Adding Stories

- There are 4 **types of stories** in Tracker
  - Features
    - The default story type
    - Provide verifiable business value to the team's customer
  - Chores
    - Stories that are necessary but provide no direct, obvious value to the customer
    - They don't require extra validation when they're finished, so the states for chores are just unstarted, started, and accepted
  - Bugs
    - Represent unintended behavior that can be related to features (e.g., login box is wrong color, price should be non-negative)
  - Release
    - Milestone markers that allow your team to track progress towards concrete goals

- ***Story title*** is the only required field, but you can add details in the ***Description***.
- You can also add tasks in the story, such as "to-do" list, testing notes, or other activities such as design work.
- New stories are typically left unestimated until the delivery team meets to discuss them.
- For other updates to a story, click the arrow to the left of the story name, or double-click preview to expand the story
- As you work with stories, be aware that the different story types in Tracker have different states and workflows. For example, when you click **`Finish`** on a chore or release, it will be changed directly to the **`Accept`**ed state.

The overall workflow is described below:

a. **Write stories.** The customer, project or product manager (PM), or product owner (PO) adds new feature stories. This might be done in an activity with other team members, such as story mapping, specification workshops, or an iteration planning meeting (IPM). Mock-ups, assets, or other examples may be attached to stories and/or epics. Stories are in the unscheduled state if they are added to the Icebox, are unestimated, or if they have points to estimate in place of an action button.

b. **Prioritize stories.** The customer/PM/PO prioritizes stories in the Backlog. Stories are then in the unstarted state, and remain unestimated.

c. **Estimate stories.** In an IPM, the team discusses each story to gain shared understanding, adds extra information as needed (such as acceptance criteria), and collectively estimates each story. <u>Estimated</u> stories have a Start button.

d. **Start stories.** When they're ready, a developer or developer pair clicks **`Start`** on the next unstarted, estimated story in the current iteration. The story is now in the started state, with a Finish button and, unless preassigned, the person who clicked Start becomes a <u>story owner</u>. The developer(s) collaborate with other team members (such as the customer/PM/PO, designers, and testers) to perform the testing and coding activities to build the feature increment represented by the story.

e. **Finish and deliver stories.** When coding and testing activities for the story have been completed, and the automated tests for it have all passed, the developer(s) click the **`Finish`** button (or possibly their commit message does this via Tracker's Software Configuration Management (SCM) integration. Now the **`Deliver`** button is available. Figure 1.1 shows a snapshot of Pivotal Tracker.

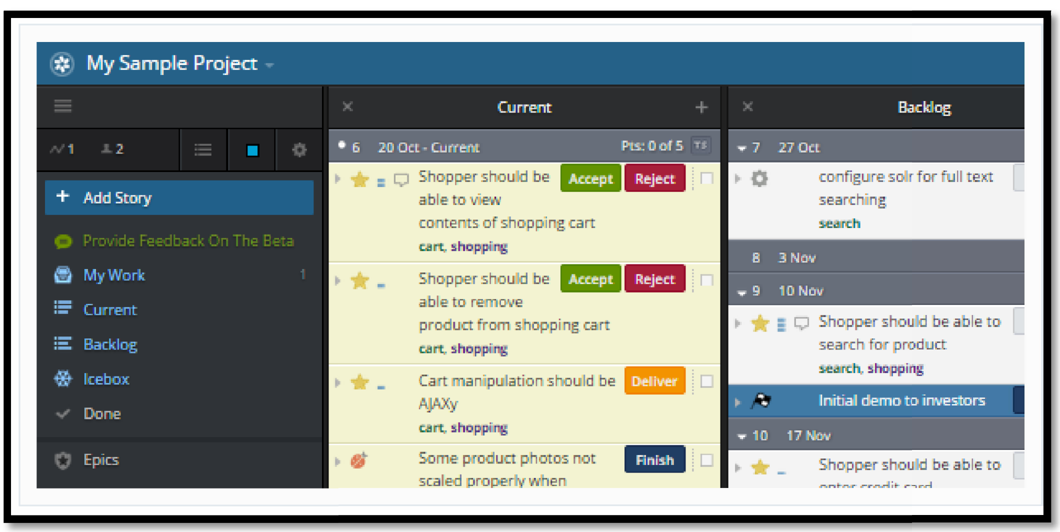


Figure 1.1 Pivotal Tracker Current and Backlog Panels

f. **Test stories.** After the Continuous Integration (CI) build for the newly committed code has passed, the code is deployed to appropriate test environments, and stories are marked as delivered by a team member or automated deploy process. Now the green `Accept` and red `Reject` buttons are visible.

g. **Accept or reject stories.** The customer/PM/PO, possibly in collaboration with testers, designers, and other team members, verifies whether acceptance criteria have been met, and accepts or rejects the story, completing the feedback loop. The accepted story turns green and moves to the top of the current iteration.

h. **Stories move to the Done panel.** At the end of the iteration, accepted stories move to the `Done` panel.

Story states in Pivotal Tracker are shown in Figure 1.2 below.

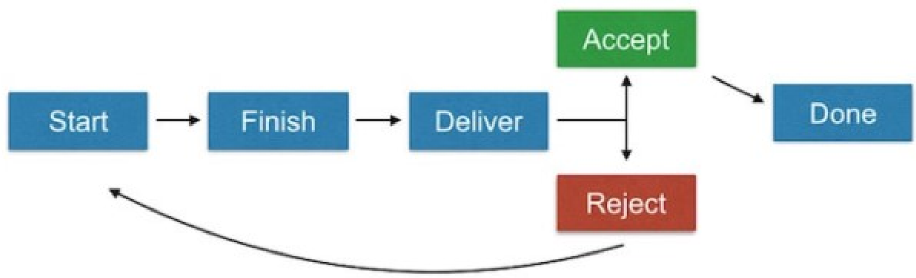


Figure 1.2 Pivotal Tracker States

Note: More guidelines on how to use Pivotal Tracker can be accessed from

https://www.pivotaltracker.com/help/articles/quick_start/

https://usersnap.com/blog/pivotal-tracker-web-projects/

https://code.tutsplus.com/tutorials/pivotal-tracker-101-for-developers--cms-22588