Transcript

Practicing Agile Estimation Techniques

Learning Objectives

After completing this topic, you should be able to

- *estimate user story size and velocity for a given project*
- *assign prioritized user stories to iterations for a given project*

Exercise overview

In this exercise, you're required to recognize how to plan a release using an agile approach.

This involves the following tasks:

- estimating user story sizes and team velocity, and
- assigning prioritized user stories to iterations

Estimating stories and team velocity

A development team is working on a project to develop a widget that will enable users to receive updates on prices in the stock exchange. You're planning the project's release using story points. You've identified four user stories – stories A, B, C and D – for the next iteration and have assigned them story points.

Question

Story B is expected to involve twice as much development effort as story D, and story A will require three times as much effort as story D. Story C is expected to require the most effort – five times as much as story D and more than double that of story B.

Match each user story to an appropriate number of story points, representing the relative amount of development effort it requires.

Options:

A. Story D

B. Story B

C. Story A

D. Story C

Targets:

1. 1
2. 2
3. 3
4. 5

Answer

Story D should be assigned 1 story point, because it only requires a fifth of the highest amount of development effort – which is estimated at 5 points.

You should assign story B the value of 2 story points, because it's expected to involve twice as much actual effort as story D – and story D has a value of 1 point.

Story A should be assigned the value of 3 story points, because you anticipate it to require three times the effort of the smallest user story, estimated at 1 point.

Story C should be assigned 5 points because it's expected to require the most effort – five times as much as the smallest user story.

Correct answer(s):

Target 1 = Option A

Target 2 = Option B

Target 3 = Option C

Target 4 = Option D

Question

To facilitate release planning, you need to estimate the development team's velocity. To do this, you decide to use a practice iteration.

Based on data from the practice iteration, how do you determine an estimate of the team's velocity?

Options:

1. The number of story points completed in the iteration divided by the number of team members
2. The total number of story points completed multiplied by the number of weeks in the iteration
3. The total number of story points that the team completed during the iteration

Answer

Option 1: *Incorrect. The number of members in a development team will help determine the team's velocity, but you don't need to factor in this value when actually calculating velocity. Instead, given that you're using a practice simulation, you look only at how much work the team has managed to complete in the given time.*

Option 2: *Incorrect. You could express the team's velocity as the number of story points completed per iteration – but to do that, you'd divide the number of completed points by the number of iterations, instead of multiplying the values.*

Option 3: *Correct. A team's velocity refers to the amount of work, often measured in story points, that it can complete per iteration.*

Correct answer(s):

3. The total number of story points that the team completed during the iteration

Assigning stories to iterations

The project for the stock price update widget is date-driven, with a release date fixed for 6 weeks from the start date. The development team has agreed to use two-week iterations.

Supplement

Selecting the link title opens the resource in a new browser window.

Learning Aid

Access the learning aid Estimating Team Velocity for more information about this scenario.

Question

The team's velocity is estimated at 16 story points per iteration.

What is the maximum number of iterations you can include in the project?

Options:

1. 6 iterations
2. 3 iterations
3. 2 iterations
4. 16 iterations

Answer

Option 1: *Incorrect. The project deadline is six weeks from the start, and the team won't be using one-week iterations. As a result, the team can't complete as many as six iterations.*

Option 2: *Correct. If the project duration is six weeks and each iteration will be two weeks long, the team can fit three iterations into that time. Six divided by two is three.*

Option 3: *Incorrect. In this instance, the team has six weeks in which to complete the project. Given that it will be using two-week iterations, it can fit more than just two iterations into the available time.*

Option 4: *Incorrect. The team has six weeks in which to complete the project work and will be using two-week iterations. It can't complete as many as 16 iterations in the available time.*

Correct answer(s):

2. 3 iterations

Question

Based on previous projects, you've estimated that the development teams's velocity is 16 story points per iteration. The team will be able to fit 3 two-week iterations into the 6-week project.

Based on the estimate, what number of story points can they expect to complete during the project time frame?

Options:

1. 32 story points
2. 48 story points
3. 19 story points
4. 36 story points

Answer

Option 1: *Incorrect. Rather than multiplying 16 by 2, you need to multiply 16 by the number of weeks in the iteration – 3. This results in a value of 48, not 32.*

Option 2: *Correct. You calculate how many story points the team can complete by multiplying their velocity per iteration – 16 – with the number of weeks in each iteration, and 16 times 3 is 48.*

Option 3: *Incorrect. To calculate how many story points the team can develop during the project time frame, you need to multiply its velocity of 16 points per iteration by 3 – because each iteration includes three weeks.*

Option 4: *Incorrect. You'd multiply 16 by 3 to calculate how many points the team can develop by the end of the project, rather than during each iteration. Instead of multiplying 16 by 6, you need to multiply it by 3, which is the number of weeks in each iteration.*

Correct answer(s):

2. 48 story points

Question

The team has used the MoSCoW model to categorize all user stories based on their priority levels. Stories in the "must have" category are marked with an M, "should have" stories are marked with S, "could have" stories are marked with C, and "would have" stories are marked with W. Refer to the learning aid Prioritizing User Stories for more information on how this was done.

Which approach should the team use when assigning user stories to iterations?

Options:

1. Assign all M-rated stories, followed by S-rated stories, to the earliest iterations

2. Group the stories based on theme and then assign the groups to iterations based on their priority levels
3. Arranging user stories by their estimated costs
4. Delivering features in increasing order of priority with W-rated stories assigned first

Answer

Option 1: *Correct. In a date-driven project, it's important to assign user stories to iterations in decreasing order of their priority. For example, the team should assign M-rated stories, which have the highest priority, to the earliest iterations. Then it should assign S-rated stories, followed by C-rated stories. Finally, if time permits, the team can assign W-rated stories, which have the lowest priority and may be left for a later release.*

Option 2: *Incorrect. The team can't arrange user stories by theme if it already prioritized using the MoSCoW model. Instead it should assign the stories in decreasing order of their priority, with M-rated stories assigned to iterations first, followed by S-rated stories, C-rated stories, and finally W-rated stories.*

Option 3: *Incorrect. In a date-driven project, it's important to focus on delivering the most important features early on. So the team should use the MoSCoW ratings it has assigned to allocate the stories to iterations in decreasing order of their priority.*

Option 4: *Incorrect. The team should assign the stories to iterations in decreasing – rather than increasing – order of priority. Especially in a date-driven project, the aim should be to deliver the stories of highest priority during the earliest iterations.*

Correct answer(s):

1. Assign all M-rated stories, followed by S-rated stories, to the earliest iterations

User story size and team velocity have been estimated for a given project, and appropriate ways to assign user stories to iterations have been identified.