# Purpose

Unlike previous labs, this lab does not contain explicit steps or code snippets. This is done intentionally to leave room for discussion and decision-making.

Leveraging what we learned in prior labs, we will now add [*expense management*](https://en.wikipedia.org/wiki/Expense_management) capabilities to PAL Tracker.

# Discussion points

* What are user stories and how are they used at Pivotal?
* What is an acceptance criteria?

# Expense management

Persons working on a project may incur business-related expenses. Some examples include:

* traveling to meet with a client on-site
* paying for a business dinner
* purchasing equipment

These expenses can be submitted to the accounting department for reimbursement. Upon receipt, the accounting team will review a claim and determine whether it qualifies for reimbursement.

The story below adds [expense management](https://en.wikipedia.org/wiki/Expense_management) capabilities to PAL Tracker.

# Implementation considerations

Think about the following as you're working through the user story. Discuss these points with your partner if you are pairing.

* Will you use Test Driven Development (TDD) to develop the new functionality?
* Will this functionality be added to an existing microservice or is a new service warranted?
* What new components are needed?
* What database migrations are needed?
* Which of the existing services will need to change? How?
* Does your implementation change which services need to be discovered, discoverable?
* Is a new circuit breaker needed? What is the appropriate circuit breaking behavior?

# User story

**As a person on a project, I want to submit an expense claim associated with the project so that I can be reimbursed.**

Acceptance criteria:

* Claim includes the following information:
  + user who is submitting the claim
  + project with which the claim is associated
  + type of expense (food, lodging, travel, equipment, or other)
  + total amount spent
  + date of the expense
* All of the claim information is required.
* Only persons allocated to a project can claim expenses for that project.
* New expenses can only be claimed for active projects.
* Multiple claims can be submitted for a single project.

# Extra

If you are finished with this assignment before the rest of the class is done, implement the following user stories:

**As an auditor, I need an description of how an expense was incurred so I can determine whether it qualifies for reimbursement and process the claim.**

Acceptance criteria:

* An additional description field is added to the claim.
* The new description field is required.
* Previously submitted claims, have a description of "no description available".

# Assignment

Let the instructor(s) know if you have completed this assignment. One pair will be asked to demo their implementation for the class.