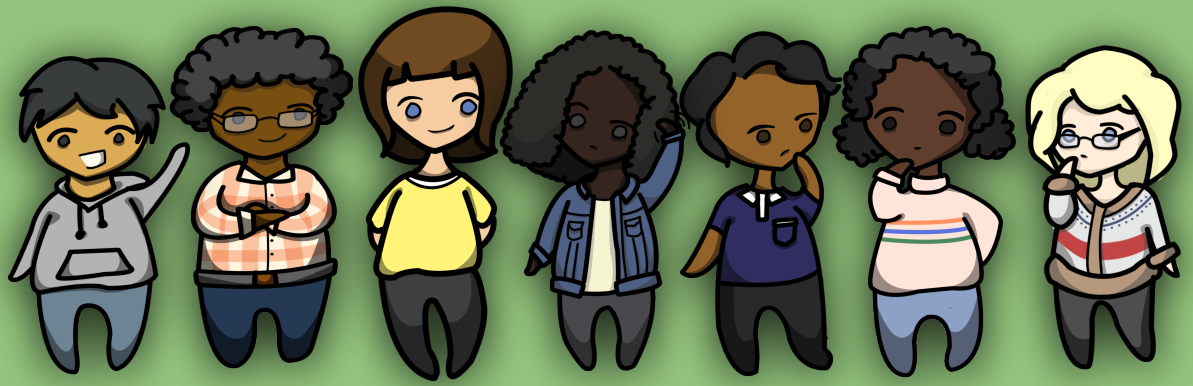
# CIS2170 USER INTERFACE DESIGN
# DESIGNING FOR USABILITY I

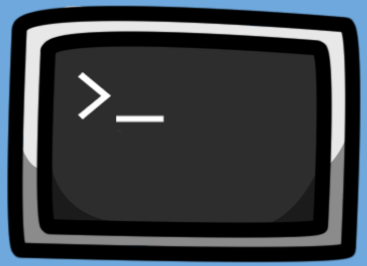


## WEEK 4 CLASS 1

Dr. Gillis and Dr. Zhao
Artwork by Lilian Shi

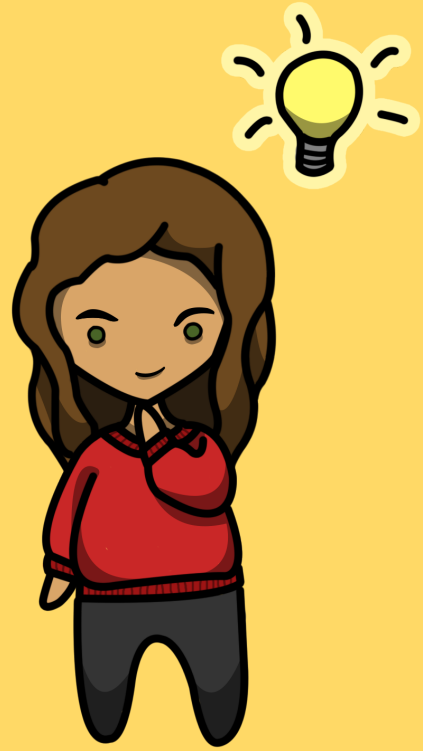
IN TODAY’S CLASS:

- USER STORIES
- SCENARIOS
- USE CASES



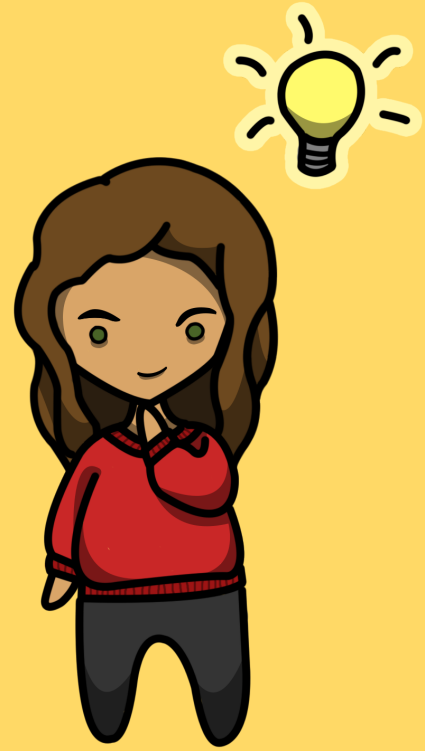
# USER STORIES

User story - a short, simple description of a feature from the perspective of the user who wants the new capability.

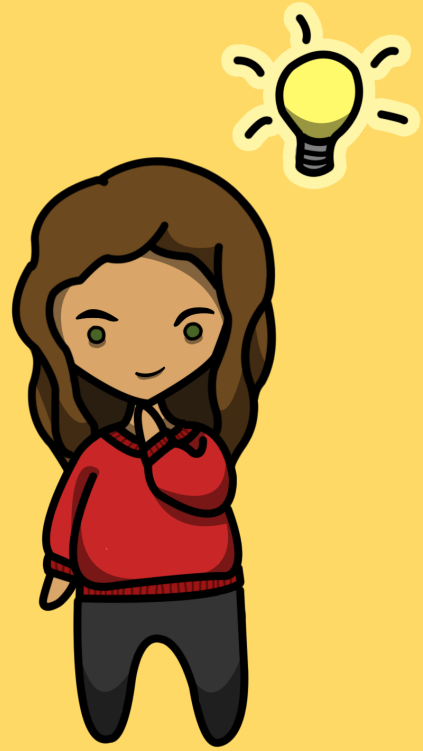


As a **job applicant** I would like to **save my resume information** , so that **I don’t have to re-enter it every time I apply for a new job** .

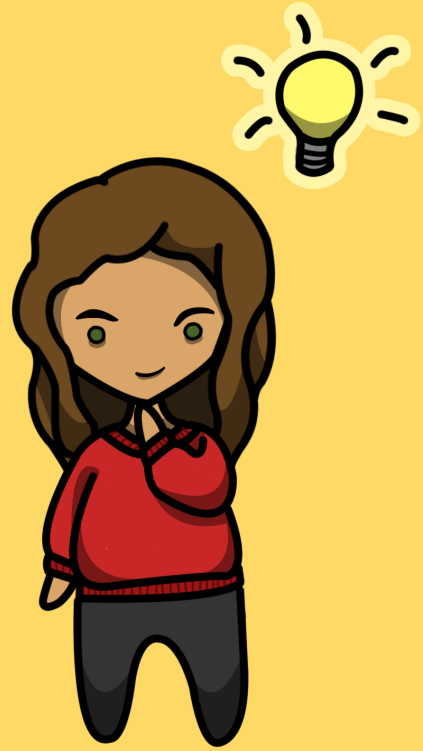
Purpose - focus on what users need from a product at a high level, without getting into the details of how the product will fulfill those needs.



Originated in Agile software development methodologies and have become a popular tool for expressing the needs of users.



As a **practice**, write your user story of WebAdvisor



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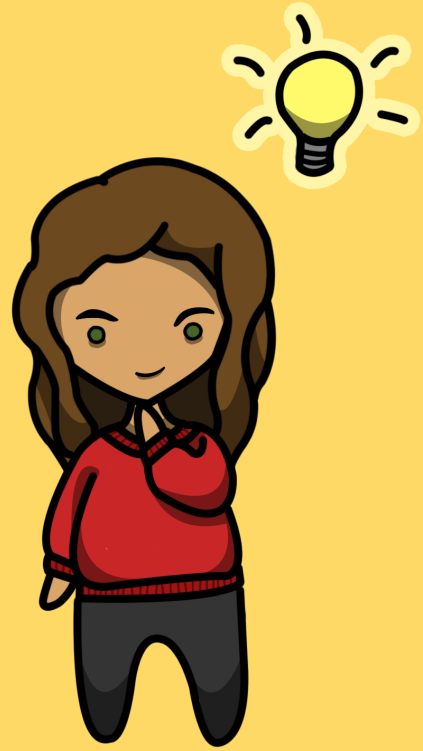
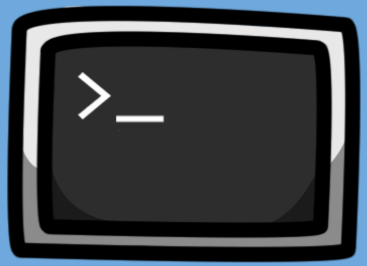
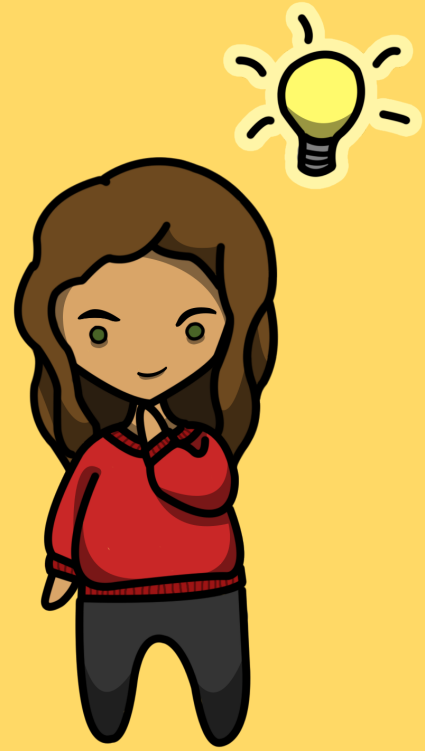


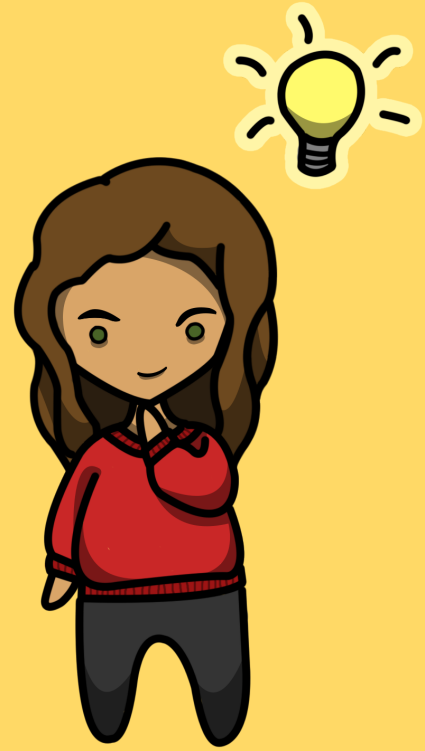


# SCENARIOS

Scenarios - “a day in the life of…” (typical/ best case/worst case)

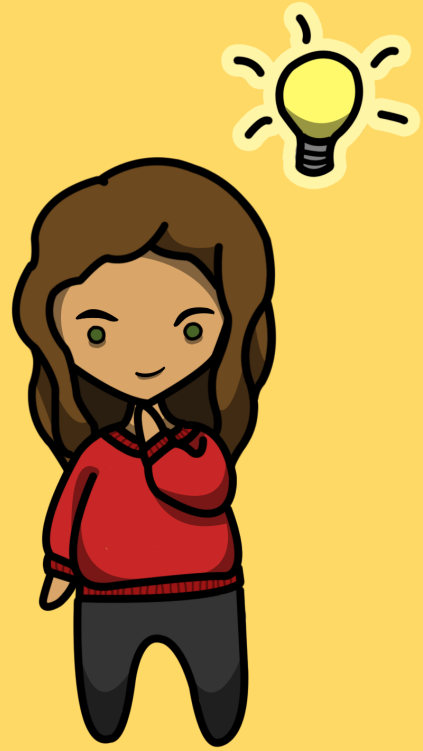


More detailed context than user stories, including the user's motivations, actions, and the overall flow of interaction with the product.

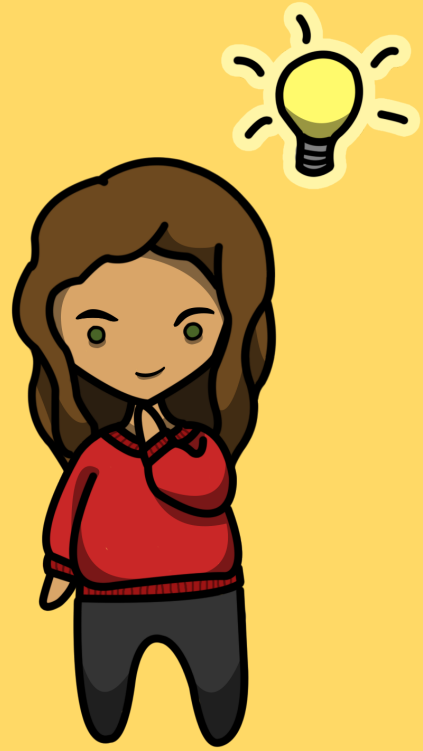


**Scenario:** John Doe, a web designer, has been contracted to create a new website for a small local bakery. He has a clear idea of how he wants the website to look. He starts a new project in his design tool, names it "Acme Website Project", and sketches out the basic structure. He uses the color palette tool to apply the bakery's brand colors to his design. After he's happy with the design, he previews it on different devices, makes necessary adjustments, and finally, exports the design to present to his client.

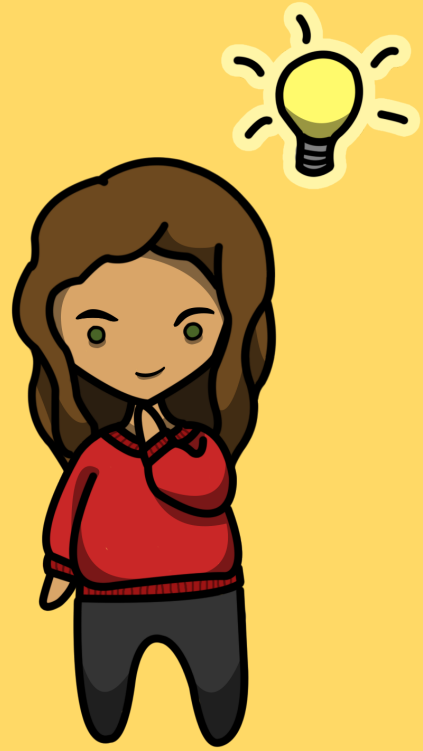
Scenarios help us to better understand how a user might interact with the thing we are designing, and the **context** in which they interact with it.



This is not about how they should interact, but more about the **reality** of their interaction

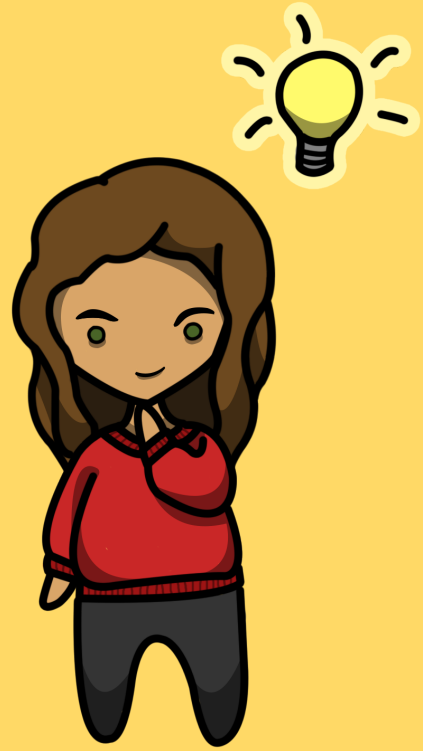


That is - user scenarios “provide **motivation** and **back stories** explaining how and why they need to interact with our solutions The way they do.”

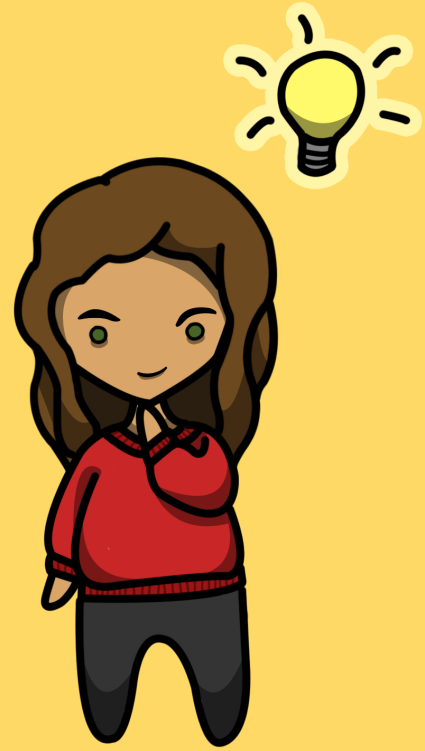


Take some time to review this website (and be sure to watch the video):

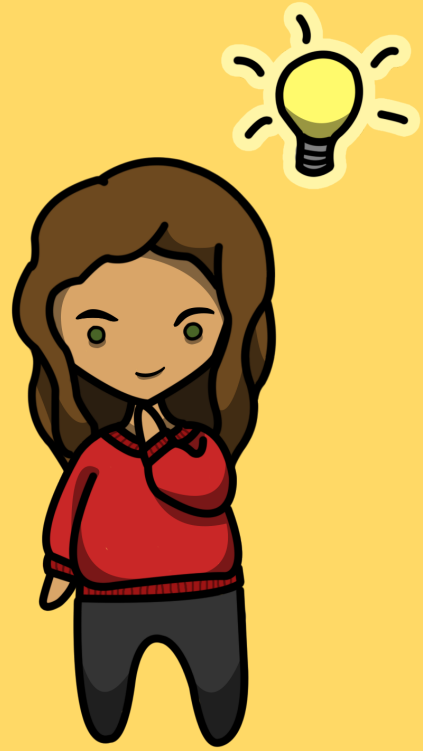
https://www.interaction-design.org/literature/topics/user-scenarios



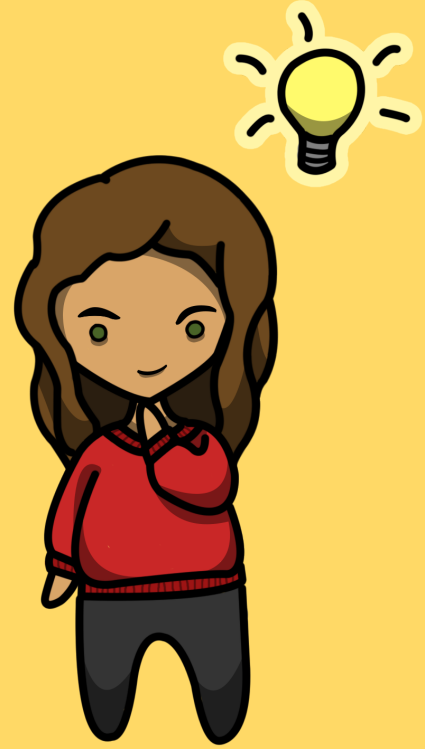
Scenarios help us empathize and understand our user



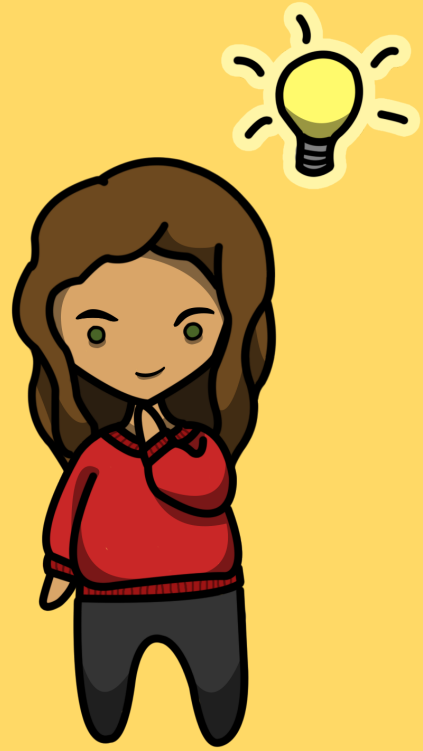
Scenarios help us explain the motivation behind the things a user might need or how a user might behave



Scenarios give context to how our personas might expect our system to work



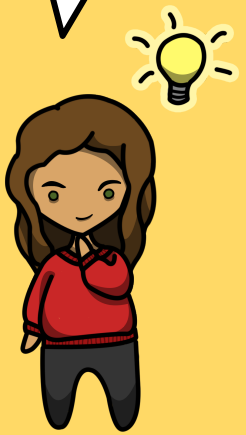
Scenarios identify pain points



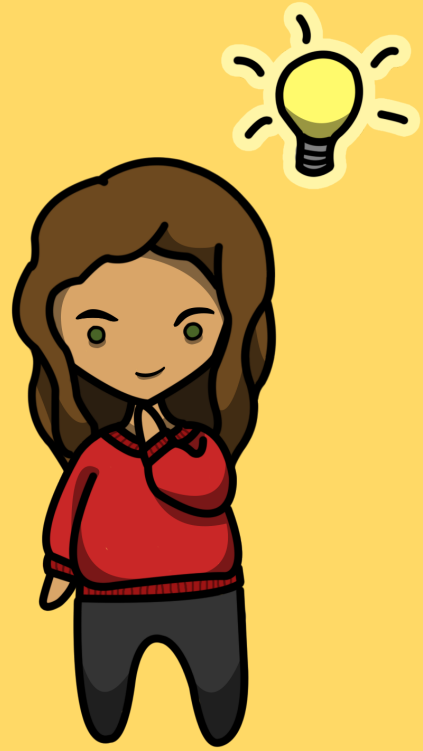
## Ingredients Of A Scenario

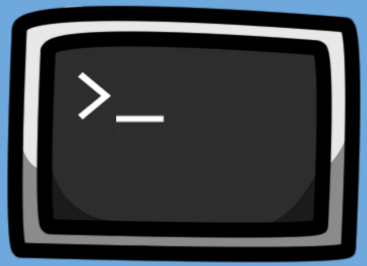
- Persona (And Their Role Within The System)
- Events Leading Up To The Scenario
- Environment Of Scenario (Physical, Legal, Social, Organizational, Etc.)

TO BUILD A SCENARIO



Scenarios are short stories that have a lot of detail - but only detail relevant to the situation.





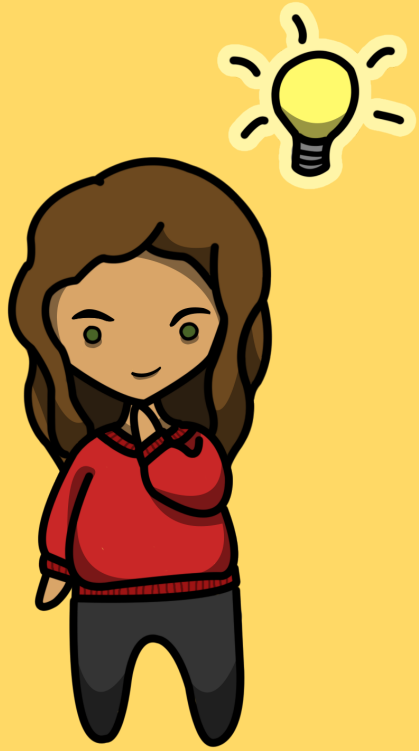
# Activity - Scenario

## Activity: Designing for Maya's Morning Commute

**Objective**: Create a scenario to explore Maya’s interaction with a commute-planning app.

**Steps**:

1. Write a narrative scenario.
2. Identify key moments (frustrations and wins).
3. Brainstorm and present design improvements.



**Meet Maya:**

*Name*: Maya Green *Age*: 27

*Occupation*: Marketing Coordinator at a tech company

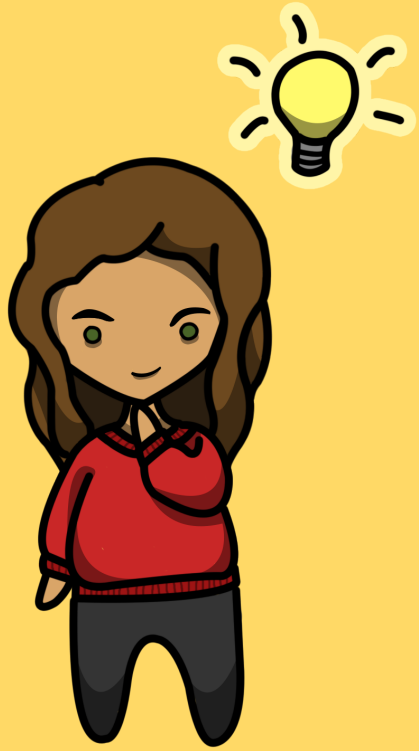
*Tech Proficiency*: Advanced

*Goals*:

- Make her morning commute efficient and stress-free.
- Reduce her carbon footprint.

*Pain Points*:

- Unreliable public transit schedules.
- Difficulty finding alternative routes.
- Frustration with apps that lack real-time updates or are cluttered.

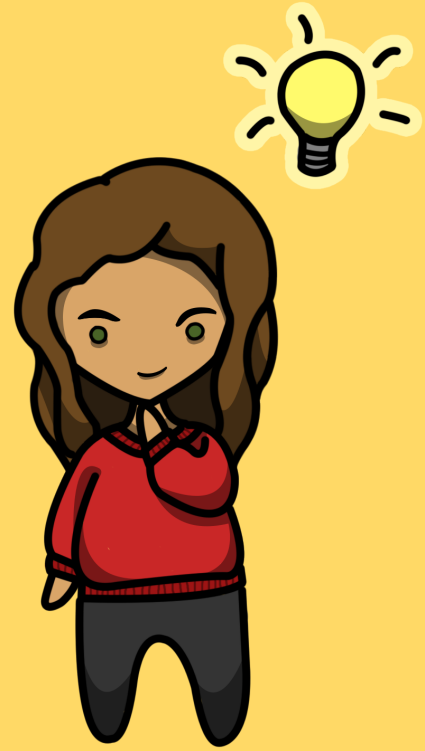


## Scenario Context

**The Commute Planning App:**

- Provides real-time transit updates.
- Recommends eco-friendly travel options.
- Suggests alternative routes during delays.

**Your Task: Create a scenario that describes Maya's experience using the app on a typical morning commute.**



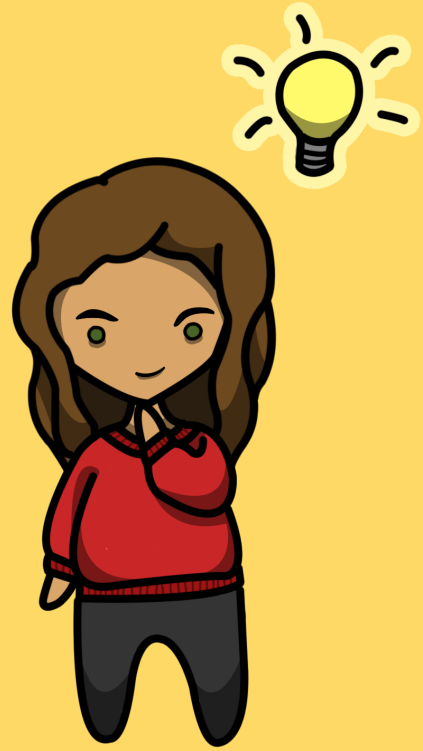
## Step 1 - Scenario Creation

Write a narrative story describing Maya's commute:

- What triggers her to use the app?
- What steps does she take?
- What challenges does she face?
- How does she feel throughout?

Example Starting Point:

*"At 7:30 AM, Maya gets a notification from her commute app: her usual subway line has delays due to maintenance. She quickly opens the app to find an alternative route that keeps her on time for work. The app recommends a combination of a bike-share and a bus ride..."*



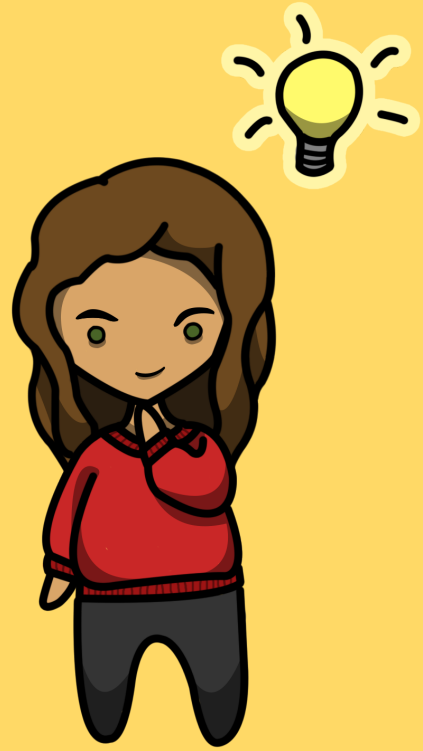
## Step 2 - Identify Key Moments

**Task:**

- Highlight 3-5 moments in your scenario:
- Where the app is helpful and intuitive.
- Where Maya encounters confusion or frustration.
- What emotions Maya feels at each moment.

**Examples:**

*"Maya is delighted when the app suggests an eco-friendly bike-share option."*
*"Maya feels frustrated when the app's bus timetable is inaccurate."*

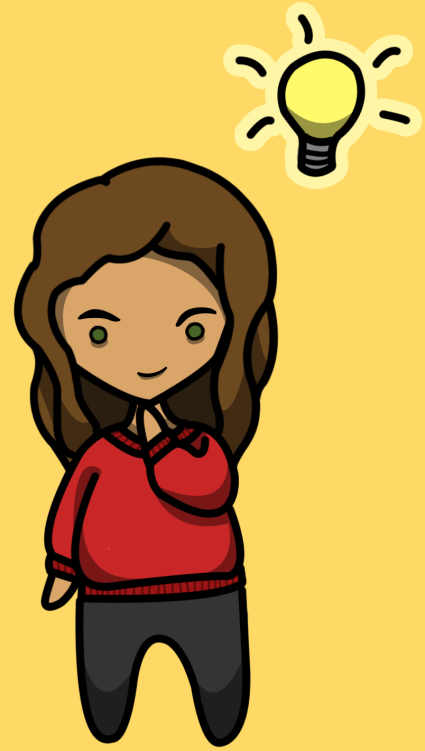


## Step 3 - Brainstorm Solutions

**Task:**
Discuss as a group how to improve the app for Maya.

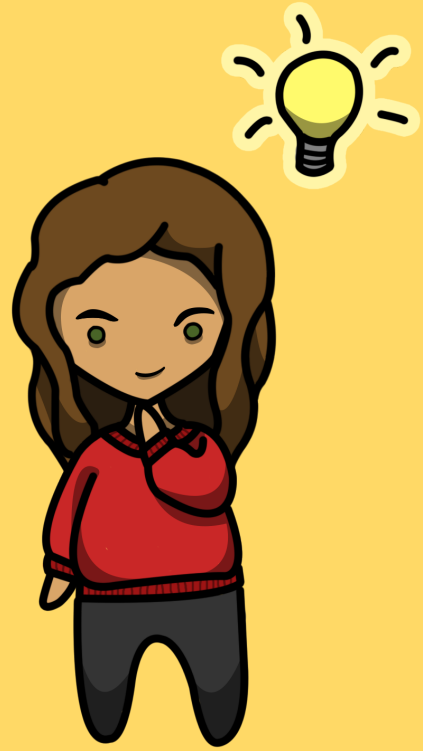
**Focus on:**
- Simplifying rerouting during delays.
- Making eco-friendly options more visible.
- Reducing user stress with better notifications or design.

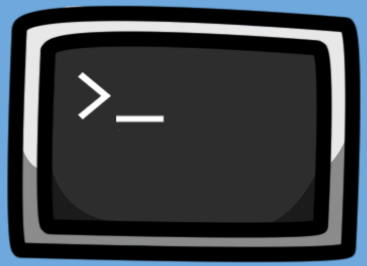
**Examples:**
*"Add a feature that visually highlights the quickest eco-friendly routes."*
*"Send real-time notifications for changes in bus schedules."*



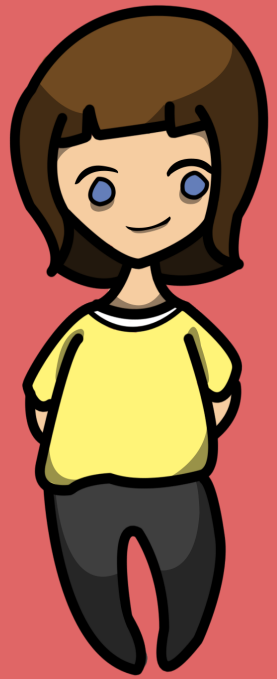
## Key Takeaways

- Scenarios help identify user pain points and opportunities for improvement.
- They provide a user-centred perspective for designing better experiences.
- Empathy and attention to detail are critical for effective UX design.






# USE CASES



Use cases might be considered
A very specific linear scenario (also called a prescriptive scenario)

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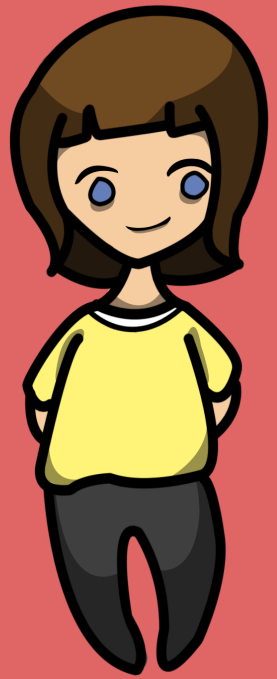

In general, they describe one use of a system that is self contained

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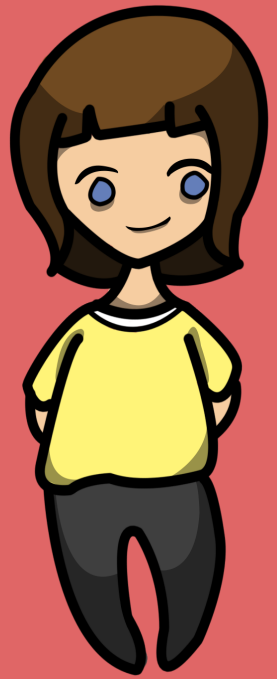

A use case includes what happened (or was assumed to happen) before the use case begins

This is called a pre-condition

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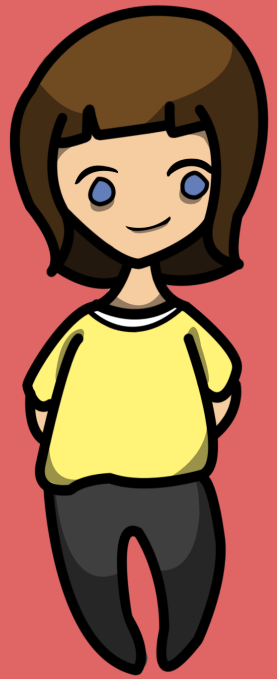

It also outlines post-conditions

These are the things that are assumed to occur after the use case finishes (such as being in a stable state)

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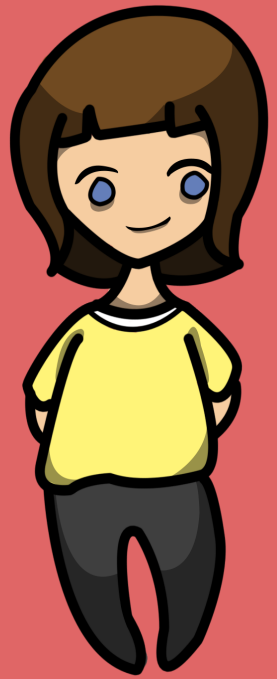

All use cases include the basic flow

This is what is expected
Sometimes called the “sunny day scenario”
where everything happens as it should

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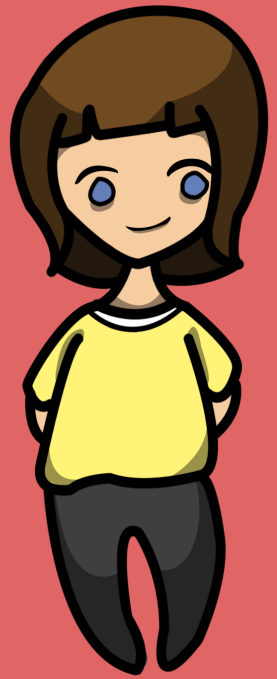

Some use cases include alternate flows

These describe what happens when things don’t work properly, the user does something “unexpected”, or choice exists

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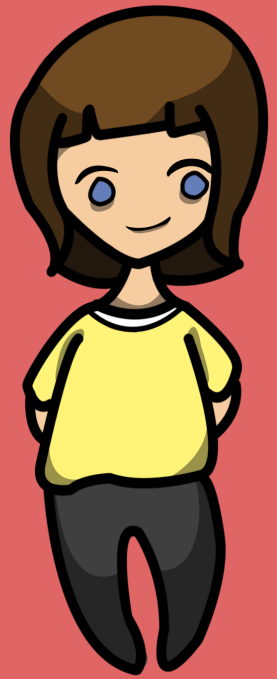

All flows/paths must end in a stable state

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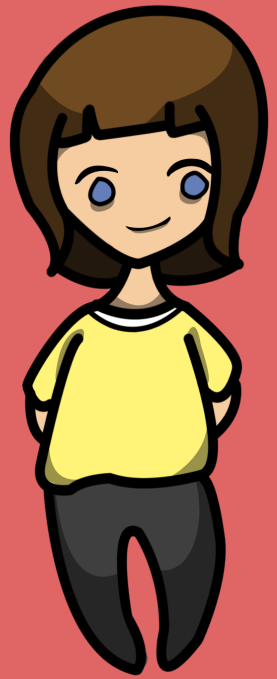

Use cases also identify the actors involved!

Actors might be users or they might be other systems that interact with our system

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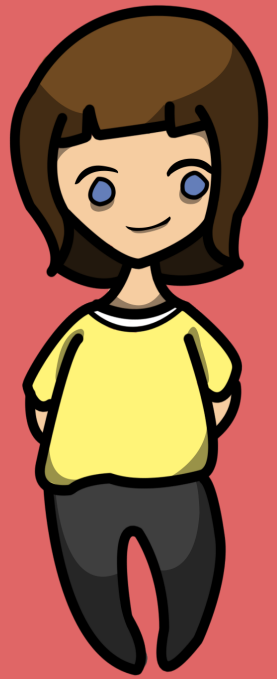


Use cases must include
What the actor is expected to do

And

How the system responds
To the actor’s actions

!

THERE ARE THREE TYPES OF USE CASES

BRIEF

CASUAL

FULLY DRESSED

THERE ARE THREE TYPES OF USE CASES

**BRIEF** | CASUAL | FULLY DRESSED

- PARAGRAPH FORMAT
- ACTORS EMBEDDED IN THE PARAGRAPH
- INFORMS WHAT THE ACTOR DOES AND WHAT THE SYSTEM DOES IN RESPONSE
- MAIN “SUNNY DAY SCENARIO” FLOW ONLY
- STARTS & ENDS IN A STABLE STATE

THERE ARE THREE TYPES OF USE CASES

BRIEF

CASUAL

FULLY DRESSED

- PARAGRAPH FORMAT
- ACTORS EMBEDDED IN THE PARAGRAPH
- INFORMS WHAT THE ACTOR DOES AND WHAT THE SYSTEM DOES IN RESPONSE
- SIMILAR TO BRIEF, BUT INCLUDES SOME ALTERNATE FLOWS/PATHWAYS
- STARTS & ENDS IN A STABLE STATE

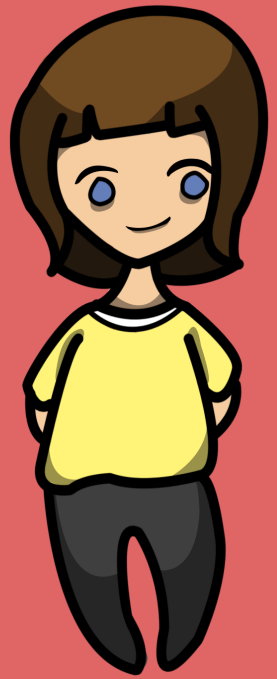
THERE ARE THREE TYPES OF USE CASES

BRIEF

CASUAL

FULLY DRESSED

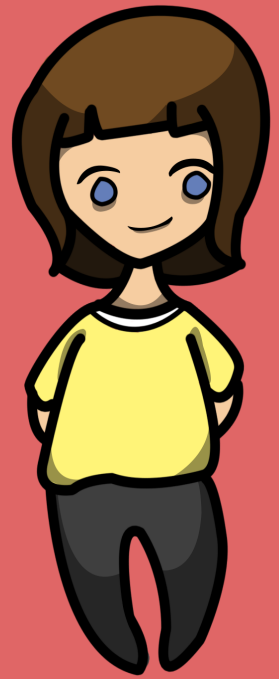
- TABLE/BULLET FORMAT
- ACTORS IDENTIFIED
- INFORMS WHAT THE ACTOR DOES AND WHAT THE SYSTEM DOES IN RESPONSE
- MOST DETAILED
- NUMBERED LIST, ALTERNATE PATHS CLEARLY STATED
- STARTS & ENDS IN STABLE STATE



# A Brief Use Case

2.0 Log Into The System
The user will enter their credentials (username/password) into the system which is connected to the main server. The system will verify that the credentials represent a valid user of the system. The system will verify that the password is correct. The system will pull user settings/preferences from the server. The system will pull user permissions from the server. The system will inform the user that they have been successfully logged in. The system will present the user with their control panel based on their preferences and permissions. The system will return control to the user.

!



Pre-condition?

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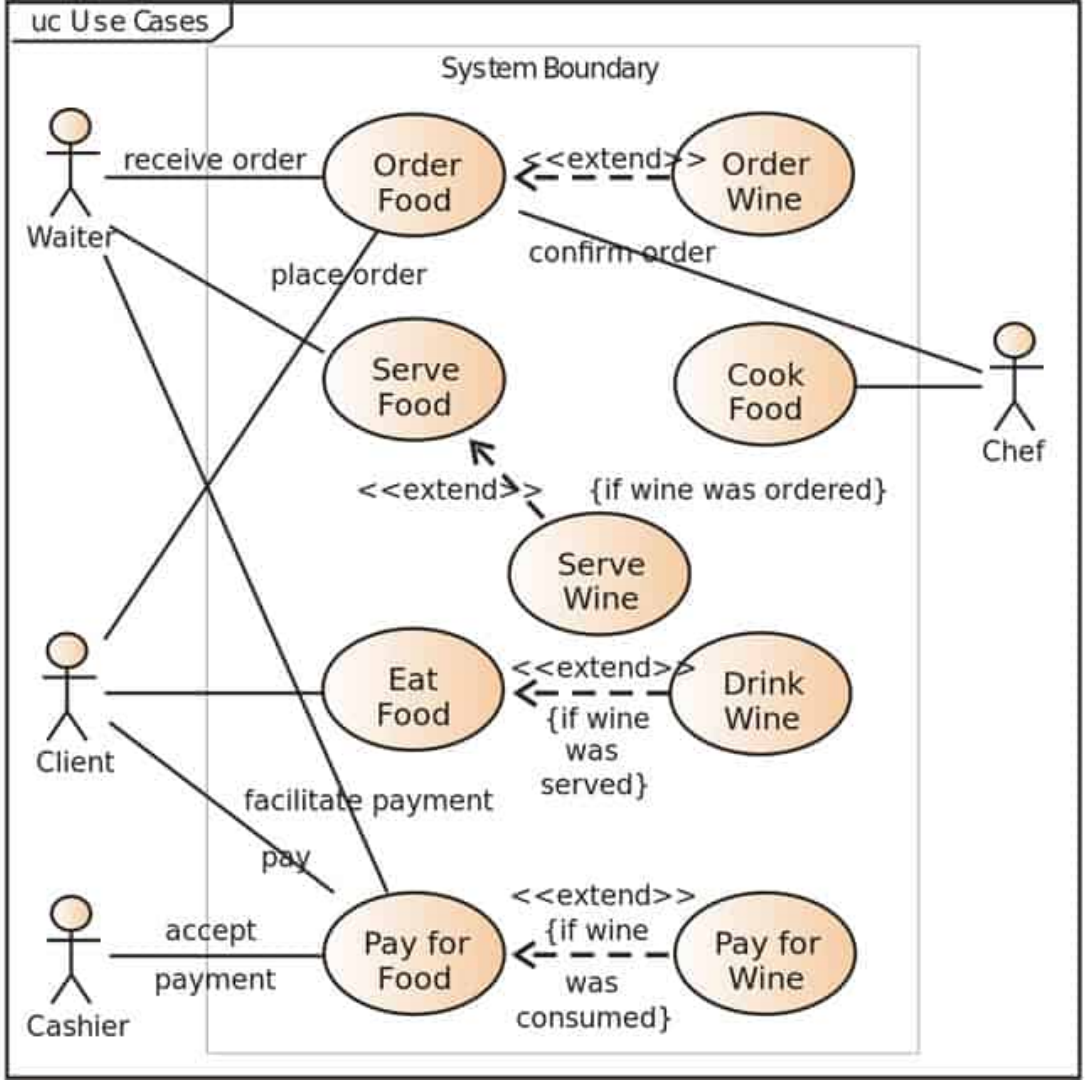
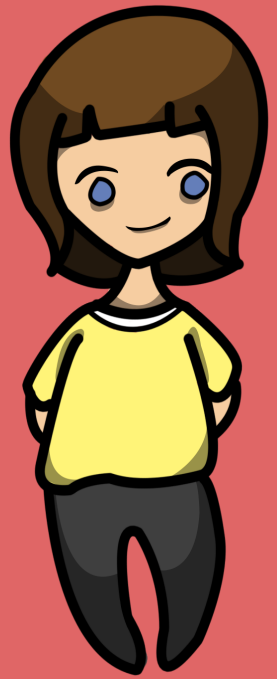
# Use Case Diagram in UML





FOR MORE INFORMATION, READ THE FOLLOWING:

https://books.lib.uoguelph.ca/systemsanalysisanddesign/chapter/use-cases/