HUMAN COMPUTER INTERACTION
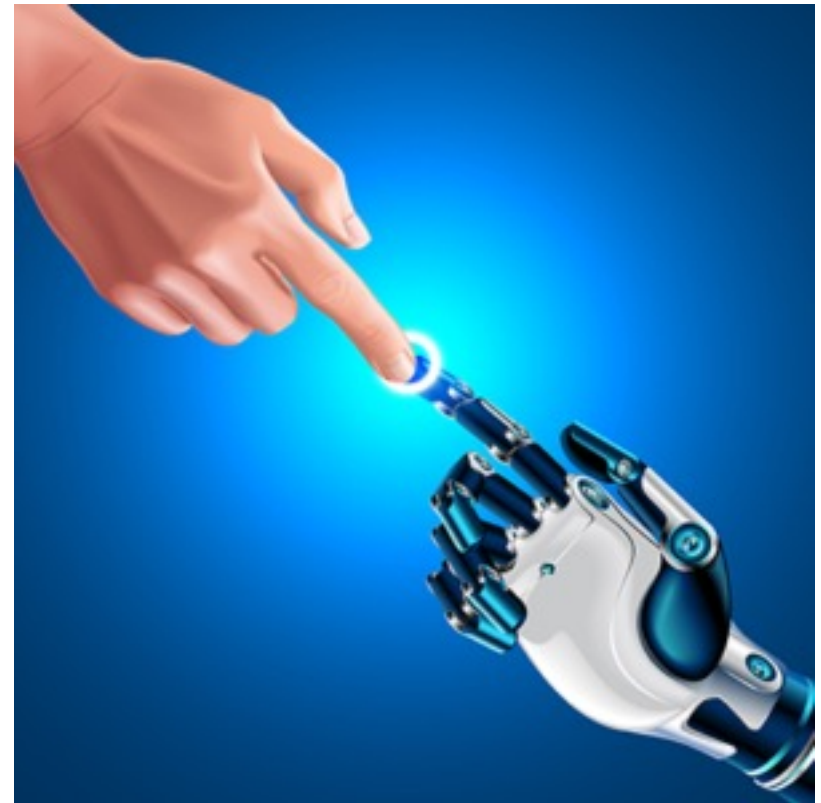
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LESSON PLAN

- **Personas**

- **Interviewing for Personas**

- **Scenarios**

- **Use Cases and User Stories**

We can't ask users to be with us all the time, thus we make user models.

PERSONA

- Describes (your app's) *imaginative* **users archetypes**.

- Is based on the **real research** and observation.

- Shows **user goals** and their behavior patterns

- Helps to crack "what" and "why" questions

- **Primary,** secondary, supplemental, non-persona

WHAT ARE PERSONAS?

- **A common technique to communicate user research results in a simple and accessible manner**

- **Made-up people, based on the data generated by user research**

- **Can include a variety of information, tailored to the particular project and the team's needs. Most personas will include:**
  - Pictures of the persona
  - Quote or tagline
  - Information on the persona in a work- or life-context relevant to the application
  - Information on the users frustrations, pain points, needs, wishes, and desired features
  - Additional personal details to make the persona more complete

PERSONAS

- Used as an aid to help express, discuss and validate design questions and decisions, e.g.

  - Would the persona ("*Bob*") use this?

  - Is this logical?

  - Does this make sense to this persona?

  - Is it fun / exiting / motivating...?

  - Bob **would not like this**, because....

SOURCES

Primary

Contextual inquiry;
Talking to people directly,
Observing their behaviour

*Bonus

Secondary

Personal know-how
Stakeholders
Online discussions
Domain experts
Informed guesses
Feedback
Surveys

- **Talk to people** who a different from you and what you know already

- Look for **reoccurring issues** and trends, language (lingo), surprises...

- Acknowledge your biases and be open-minded

HOW DO YOU USE PERSONAS?

- Create one persona to represent each primary segment of the target user population

- 3-5 personas at most

- Information contained in a persona will vary

- Design and develop for the personas as if they are actual users of the site or system

WHY ARE PERSONAS SO USEFUL?

Ensure user research is taken into account throughout the project

- Distill user research into easily understood, bite-size forms

- Puts a real face on the sometimes rather dry results from user research

CONDUCTING PERSONA INTERVIEWS

- **When conducting an interview, it is important to:**

  - Establish trust with interviewee
  - Obtain the information you are looking for
  - Plan and practice your interview

- **Basic steps for conducting a persona interview:**

  - Step 1: Understand your Interview Goals
  - Step 2: Plan Your Interview
  - Step 3: Prepare for Your Interview

STEP 1: UNDERSTAND YOUR INTERVIEW GOALS

- **Interview goals should include finding out:**

  - The background of the people you are interviewing
  - What tasks they have to perform
  - How those people accomplishes the task in question now
  - How they'd like to do them better in the future
  - What corresponding features they look for
  - What other comparable applications are currently available

STEP 2: PLAN YOUR INTERVIEW

- **Know what types of people you will interview and how many people you will interview**

- **The more varied or diverse your target user population is, the more people you will need to interview**

- **When possible, interview potential users**

- **Also consider interviewing additional stakeholders, such as administrators and managers**

- **If you have difficulty finding potential users, find people who can role-play or speak on behalf of a potential user**

STEP 3: PREPARE FOR YOUR INTERVIEW

- **Be well-prepared and have the interview well-planned**

- **Prepare an opening statement that includes:**

  - Goals for interview
  - Major topics to be covered
  - An estimate of how long the interview will last

- **Plan your questions**

PLANNING YOUR QUESTIONS

- **Your first set of questions should be designed to:**

  - Get the interviewee talking

  - Obtain some background information

  - Establish trust

  - Show that you are interested in what they have to say and why

- **Questions should go from familiar to less familiar, and from simple to more complex**

- **Use a mix of closed-ended and open-ended questions**

CONCLUDING YOUR INTERVIEW

- **End an interview with an open-ended question such as:**

    - "Is there anything else I should have asked?"
    - "Is there anything else you want to tell me?"

- **Be sure to thank the interviewee for his or her time**

EXAMPLE TEMPLATE

Background Bio

Name, (age), (role), occupation, education

Description

E.g. use environment or context, where the problem occurs and current solutions and frustrations.

Photo(s)

Goals

- What are the user's end goals?

- 2-4 end goals and 0-1 life goals is enough for this workshop

Mapping

E.g. computer skills, necessity vs fun, quality vs price.

Example template, yours can look different!

EXAMPLE TEMPLATE

Petter Tamm

44, botanic garden worker, father of two children

As a lead gardener, Petter is responsible in **ordering nutritions** and specific soil for the plants for the city's botanic garden. Currently he has to **do bi-weekly orders** over the phone from his office, calling manufacturers one by one.

Goals

- Wants to manage bulk orderings more efficiently
- Is looking for quality reviews about new products

Reads reviews to find best...

quality   price

Example template, yours can look different!

Pat (Patricia) Jones[1]

- 43 years old
- Employed as an Accountant
- Lives in Cardiff, Wales

Pat loves public transportation and knows at least three routes to get there from home. When she arrives at work, she scans all her emails first to get an overall picture before answering any of them. (This extra pass takes time but seems worth it.) Some evenings she plays computer puzzle games like Sudoku before bed.

Background knowledge and skills

- Pat works as an accountant in a consulting firm. She just moved to this employer 1 week ago, and their software systems are new to her. She describes herself as a "numbers person". She is not a professional programmer but she writes and edits spreadsheet formulas in her work.
- Pat has a degree in accounting, so she knows plenty of Math and knows how to think in terms of numbers. She's never taken any computer programming or IT systems classes.
- Even though she's an accountant and deals with numbers all day at work, she likes working with numbers in her free time, too. She especially likes Sudoku and other computer games that involve puzzling.

Motivations and Strategies

- **Motivations**: Pat is proficient with the technologies she uses. She learns new technologies when she needs to, but she doesn't spend her free time exploring technology or exploring obscure functionality of programs and devices that she uses. She tends to use methods she is already familiar and comfortable with to achieve her goals.
- **Information Processing Style:** Pat leans towards a *comprehensive information processing style* when she needs to gather information to problem-solve. That is, before following any option that seems promising, she first gathers information comprehensively to try to form a complete understanding of the problem before trying to solve it. Thus, her style is "burst-y"; first she reads a lot, then she acts on it in a batch of activity.

Attitude to Technology

Pat is generally comfortable using familiar technology, but she does not get a big kick out of obtaining the latest gadgets or learning how to use them. She prefers to stay with the technologies for which she has already mastered the peculiarities.

- **Computer Self-Efficacy**: Pat has medium computer self-efficacy, meaning that she has some self-confidence in performing computing tasks other than the ones she is familiar with. This has a variety of impacts on how she uses software. For example, she will keep on trying to figure out how to achieve what she has set out to do for awhile; she doesn't give up right away when computers or technology present a challenge to her.
- **Attitude toward Risk:** Even so, Pat is risk averse when she uses computers to perform tasks. When confronted with new software features, Pat worries that she will spend time on them and not get any benefits from doing so. She prefers to perform tasks "the safe" (ie, familiar) way if possible, even if less familiar features might promise a more direct solution.
- **Willingness to Explore and Tinker**: When Pat sees a need to learn new technology, she does so by trying out new features or commands to see what they do and to understand how the software works. When she does this, she does so purposefully; that is, she reflects on each bit of feedback she gets along the way to understand how the feature might benefit her. Eventually, if she doesn't think it will get her closer to what she wants to achieve, she will revert back to ways that she already knows will work.

Burnett et al., The GenderMag Kit

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Background knowledge and skills

- Has a new job
- Self-described "numbers person"
- Knows plenty of math

Motivations and strategies

- Proficient with the technology she uses
- Doesn't spend her free time learning new technology

Attitude to technology

- Medium self-confidence in performing computing tasks
- Risk adverse
- Explores new features focusing on how they might help her, if they look like they won't help she will stop trying to use them

Burnett et al., The GenderMag Kit

Tim (Timothy) Hopkins[1]

- 28 years old
- Employed as an Account...
- Lives in Cardiff, Wales

Background
- Tim ...
  softw...
  profe...
- Tim ...
  num...
- He p...
  insta...
  tech...

Motivations and Strategies
- *Motivations:* Tim is proficient...
  systems he uses, even when...
  the same thing. He sometime...
  begin with.
- *Information Processing Sty...*
  likes a *selective information p...*
  doesn't work out he backs out...

Attitude to Technology
For Tim, technology is a source of...
software with all the new features.
- *Computer Self-Efficacy:* Tim...
  features. He doesn't give up e...
  configure something to do exa...
  to work.
- *Attitude toward Risk:* Tim do...
  challenges because he has tri...
- *Willingness to Explore and ...*
  internally. He likes tinkering a...
  though he plays with features...

Background knowledge and skills
- Has a new job
- Degree in accounting and knows plenty of math

Motivations and strategies
- Proficient with the technology he uses
- Likes learning all the available functionality of all his devices even...

Attitude to technology
- Technology is fun
- Very confident with use of technology and thinks he is better at it than most people
- Does not give up easily
- Thinks that if he can't fix a problem it is probably the software vendor's fault
- Doesn't mind taking risks
- Likes to tinker and explore, gets easily distracted

Before moving on…
define "what" of your project

What need/goal/expectation does it serve?

Scenarios
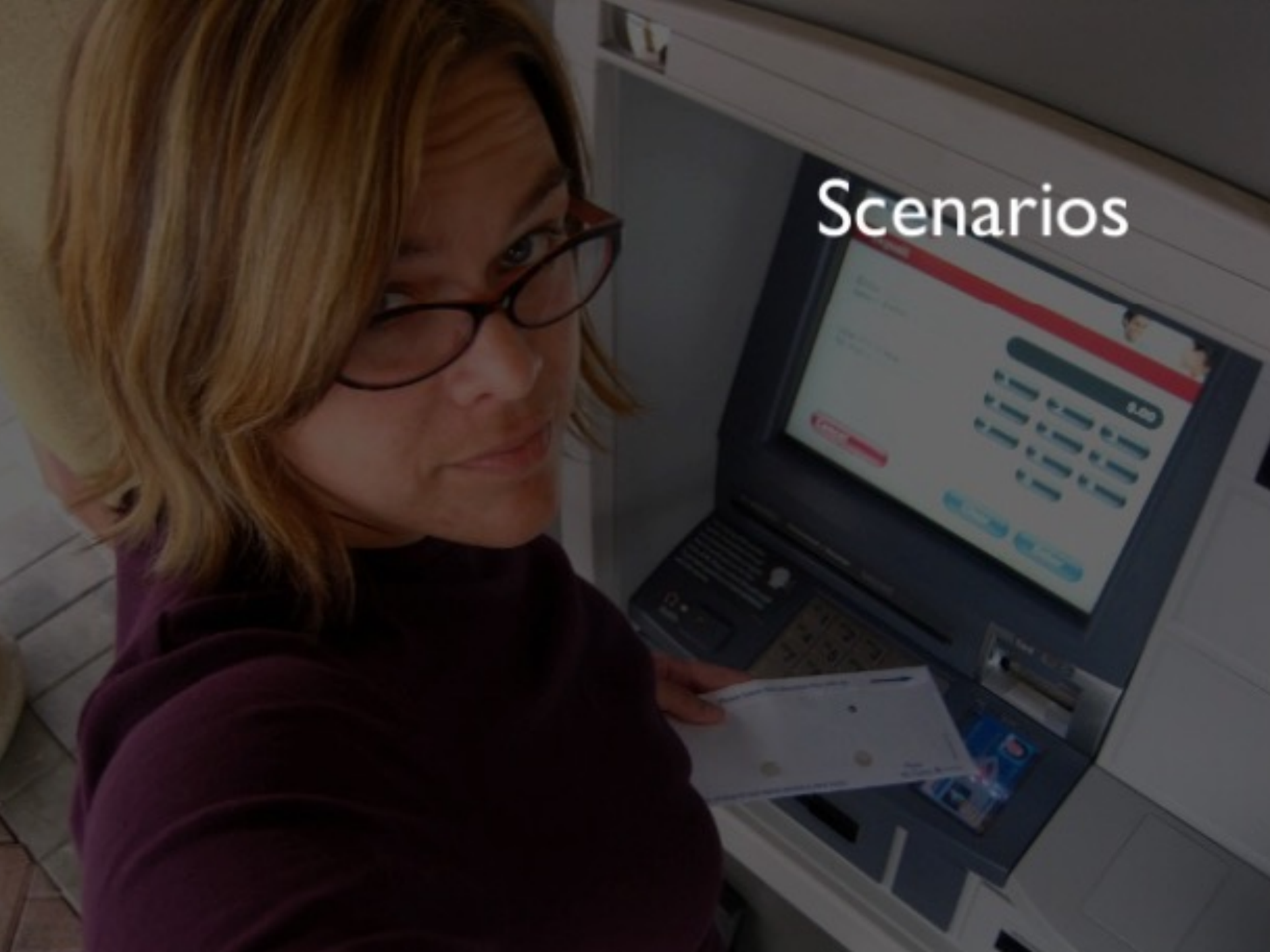
SCENARIOS

- Stories that help understand **interactions**

- A cheap way to **illustrate design solution** from user's (persona's) point of view

- Tell **user's goals, motivations** and **actions**

> "What should this product do?"
> "How would user behave in this context?"
> "What if...?"

WHAT ARE SCENARIOS?

- **Short stories about the persona using the system to complete a task or achieve a goal**

- **Typically a complete story, from beginning to end**

- **Details a persona achieving a goal or completing a task**

- **Can also describe failure to achieve a goal or complete a task**

SCENARIOS

Scope of work

- **without your solution present-based**

  - Focus is set on current practices that illustrate 'state of the art' and the problem context

- **with your solution future-based**

  - Focus on how problems could be addressed (without diving into details and jargon).

Context-based scenario

It's Friday afternoon. Petter opens his desktop computer at the botanic center's office. He wants to be quickly done with the extra flower soil orders.

Petter decides to order the same combination of products as four weeks ago, but in smaller quantity. He does not order nutritions this time.

Petter is not interested in staying at the office long. As soon as the order is done, he leaves work to pick his daughter from school.

Story background, settings

Goal "extra orders, quick"

It's Friday afternoon. Petter opens his desktop computer at the botanic center's office. He wants to be quickly done with the extra flower **soil orders**.

Petter decides to order **the same combination of products** as four weeks ago, but in **smaller quantity**. He **does not order** nutritions this time.

Petter is not interested in staying at the office long. As soon as the order is done, he leaves work to pick his daughter from school.

High level actions
(e.g. re-ordering x with changes, not ordering y.)

Motivation: efficiency

- In what **settings** will the product be used?

- Is the persona **frequently interrupted**?

- With what **other products** will it be used?

- What **primary activities** does the persona need to perform to meet her goals?

- What is the expected **end result** of using the product?

HOW DO YOU USE SCENARIOS?

- **For each persona, describe one or more typical scenarios including:**

  - Context of use
  - Environment's conditions
  - Constraints
  - Distractions

- **Add details to each scenario including:**

  - Persona's goals and tasks to be achieved
  - Environment and context of use
  - Steps toward achieving the goal (from beginning to end)

- **Iterate**

Use Cases/
User Stories

Use Cases

A step-by-step, often detailed description of product's behaviour, which helps the user (and other actors) to achieve a result.

Components:
Use Case, Actors, Steps

Success Condition: what is considered a successful end to the use case
Failure Condition: what is considered a failed end to the use case

SIMPLE EXAMPLE

Use Cases

Use Case – Ordering extra soil.
Actor – Petter / botanic garden worker

Steps / Basic course of events

1. Check what has been ordered before.

2. Renew a previous order.

3. Modify the order to suit current situation.

4. Place the order.

Alternative course of events

In step 1. check favorite orders.

User Stories

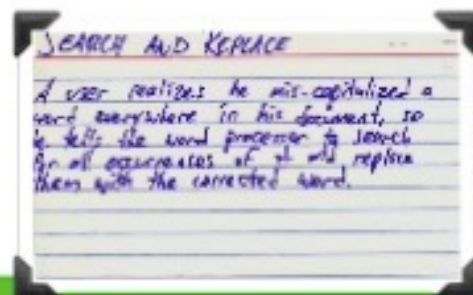A simple, easily readable description of a specific user need.

Original model popularized by Mike Cohn,
Screenshot: ScrumDesk

As a (persona/role)
I want to do (what),
so I can benefit (how).

As a botanic garden worker
I want **to order extra soil.**

User Stories

SEARCH AND REPLACE

A user realizes he mis-capitalized a word everywhere in his document, so he tells the word processor to search for all occurrences of it and replace them with the corrected word.

Epic / Saga user stories

User stories with clear conditions of satisfactions

Theme user stories

Condition details

As a gardener
I want **to order soil**.

Epic / Saga user story

As a gardener
I want **to quickly order extra soil**.

Example of a conditions of satisfactions

↓ ↓ ↓

... to see previous offers.
– *Condition: similar to the new offer*

... to modify the order.

Themed user stories

... to submit a new order.

etc.

HOW ARE USER STORIES AND USE CASES DIFFERENT THAN SCENARIOS?

User Stories	Use Cases	Scenarios
Typically follow a simple structure or template, such as: As a <user of type X>, I want to <complete some goal or task>, so that <some reason for achieving the goal or task>	Follows a template much larger and richer than a user story	Don't usually follow a template
More concise and less detailed than a scenario	Usually longer and more detailed than a scenario	Aren't constrained by a specific or prescribed structure
More formal/structured than a scenario due to the use of a template	Much more formal/structured due to following a template with many possible fields	Less formal and more about narrative and 'storytelling' than the other two

HOW ARE USE CASES AND USER STORIES DIFFERENT THAN SCENARIOS?

- **User stories typically follow a simple structure or template. For example:**

  "As a <user of type X>, I want to <some goal or task>, so that <some reason for achieving the goal or task>"

- **User stories offers more structure than a typical scenario**

- **User stories are do not contain a lot of detail**

- **A use case is closer to scenario in its level of detail and inclusion of steps, interactions and events**

- **Use cases are often more complete and detailed than scenarios**

- **A use case also follows a template much larger and richer than a user story**

EXAMPLE USE CASE

Use case for adding a new volunteer to the WFI system:

- Use Case Name: Add a Volunteer

- Description: A WFI staff member wishes to add a new volunteer to the system. The staff member must be authorized to do so, and will enter all relevant data (personal/contact info) about the new volunteer

- Actor: WFI staff member

- Precondition: The staff member is logged in and authorized to add/view/modify/delete volunteer information

EXAMPLE USE CASE – BASIC FLOW

1. The staff member indicates she wishes to add a new volunteer.

2. The system verifies that staff member is authorized to perform this function.

3. The system prompts the staff member to enter volunteer information.

4. The staff member enters contact information for the new volunteer.

5. The system checks the validity of the new data and alerts the staff member if

    - Any required data fields are missing/were not entered.
    - Any entered data is invalid.

6. Otherwise, the system prompts the staff member for final confirmation.

7. The staff member confirms the volunteer data as entered.

8. The system saves new volunteer data and the use case ends.

EXAMPLE USE CASE – ALTERNATIVE FLOW

1. The staff member indicates she wishes to add a new volunteer.

2. The system verifies that staff member is authorized to perform this function.

3. The system prompts the staff member to enter volunteer information.

4. The staff member enters contact information for the new volunteer.

5. The system alerts the staff member that data is invalid or missing.

6. The system highlights the missing or invalid data fields.

7. The staff member updates the erroneous data fields.

8. Continue with step 5 from the Basic Flow.

Task

1. Discuss and describe **1 primary persona**
2. Write **1 scenario** based on persona's goal
   - How would persona use your (future) solution?
3. Write few fundamental user stories OR an use case based on the scenario
   - Define the most basic and crucial interactions

END OF THE LECTURE