

# User Stories

## USER STORY

As a <role>  
I want <goal>  
so that <benefit>.

Acceptance criteria:

# The Planning Game

- Customer comes up with a list of desired features for the system
- Each feature is written out as a **user story**
  - Describes in broad strokes what the feature requires
  - Typically written in 2-3 sentences on index cards
- Developers estimate how much effort each story will take, and how much effort the team can produce in a given time interval (iteration)

# User stories template

User stories often follow a simple template:

*As a <type of user>, I want <some goal> so that <some reason>*

## Examples:

- **As a user, I want** to backup my entire hard drive, **so that** I can avoid loosing valuable data.
- **As a user, I want** to indicate folders not to backup, **so that** my backup drive isn't filled up with things I don't need saved.
- **As a power user, I want** to specify files or folders to backup based on file size, date created and date modified, **so that**.....

# User Story Examples

A user wants access to the system, so they find a system administrator, who enters in the user's First Name, Last Name, Middle Initial, E-Mail Address, Username (unique), and Phone Number.

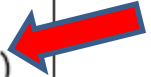
**Risk:** Low

**Cost:** 2 points

The user must be able to search for a book.

**Risk:** High

**Cost:** (too large!)



The user must be able to search for a book by Title, and display the results as a list.

**Risk:** Med.

**Cost:** 1 point

The user must be able to search for a book by Category, and display the results as a list.

**Risk:** Med.

**Cost:** 2 points

# Estimation of User Stories

- How many hours can be committed to a project per week

**Estimation** = **Idealworktime** \* **othertasks factor**

Example :

$$20 = 40 * 0,5$$

The customer have 20 points to spend in an one week iteration (How much time do they spend on other tasks?)

- Given developer estimates and project velocity, the customer prioritizes which stories to implement
  - *Why let the customer (rather than developer) set the priorities?*

# User Stories

- **Drive the creation of the acceptance tests:**
  - There must be one or more tests to verify that a story has been properly implemented.
- **Different than Requirements:**
  - Should only provide enough detail to make a reasonably low risk estimate of how long the story will take to implement.
- **Different than Use Cases:**
  - Written by the Customer, not the Programmers, using the Customer's terminology

# Planning game Exercise

## Setup:

- **2 projects (mobile app development)**
  - 2 iterations for each project
  - Development tool: POP <https://marvelapp.com/pop>
- **Groups of 4 students:** 2 students act as customers 2 students act as developers. Roles shift in the second project
- 15 min preparation: Download POP to your mobile and get a rough idea of how to use it.

# POP- Prototyping on paper

Turn any sketch or image into an interactive prototype

Quickly snap your sketches and then together to simulate your app idea.





# Planning game Exercise

## **Project # 1**

Create an app that allows people to sell and buy services to/from each other. The app should be usable by both buyers and sellers.

# Iterations

## For each iteration...

- Customers **writes** user stories
- Developers **estimate** stories
- Customers **prioritize** user stories
- Developers **implement** the story (customers think of more stories)
- Customers **performs acceptance tests**
- Evaluation of the iteration-To learn how to improve



Planning Game

# Evaluation Key Questions

- What did we do well?
- What should we do differently next time?
- What did we learn?
- Actions to apply in our next iteration

# Project #1

## Iteration # 1

**19 minutes.....**

1. Customers writes user stories (5)
2. Developers estimate user stories (2)
3. Customers prioritize user stories (1)
4. Developers implement user stories (9)
5. Release and acceptance test (2)

**Remember:** Ask your customer about the stories if details are unclear

# What did we learn?

- Estimates vs Actuals
  - With a fixed Iteration length (9 min)
    - Estimated we could do **X** story points
    - Actually, we only implemented **Y** story points.
- **VELOCITY= story points completed per iteration**
- For your next iteration, choose stories up to **Y** VELOCITY points, to fit the fixed Iteration length

# Project # 1

## Iteration # 2

**19 minutes.....**

1. Customers writes user stories (5)
2. Developers estimate user stories (2)

*Assign effort point by comparing with previously implemented stories*

*Unfinished stories can be re-estimated*

1. Customers prioritize user stories (1)
2. Developers implement user stories (9)
3. Release and acceptance test (2)

# Planning game Exercise

## **Project # 2**

Create an app to help people to keep track of their finances. It should help them to keep their budget and allow tracking of income and expenses.

# Project #2

## Iteration # 1

**19 minutes.....**

1. Customers writes user stories (5)
2. Developers estimate user stories (2)
3. Customers prioritize user stories (1)
4. Developers implement user stories (9)
5. Release and acceptance test (2)

**Remember:** Ask your customer about the stories if details are unclear



# Project # 2

## Iteration # 2

**19 minutes.....**

1. Customers writes user stories (5)
2. Developers estimate user stories (2)

*Assign effort point by comparing with previously implemented stories*

*Unfinished stories can be re-estimated*

1. Customers prioritize user stories (1)
2. Developers implement user stories (9)
3. Release and acceptance test (2)

# Acceptance Tests

- **Acceptance Tests** are specified by the customer to test that the overall system is functioning as specified  
(UAT = User Acceptance Test)
  - When all the acceptance tests pass, that user story is considered complete
  - Could be a script of user interface actions and expected results
  - Written on the back of the User Story Indexcard

# Exercise

- Write an acceptance test for this user story:

The user must be able to search for a book by Title, and display the results as a list.

**Risk:** Med.

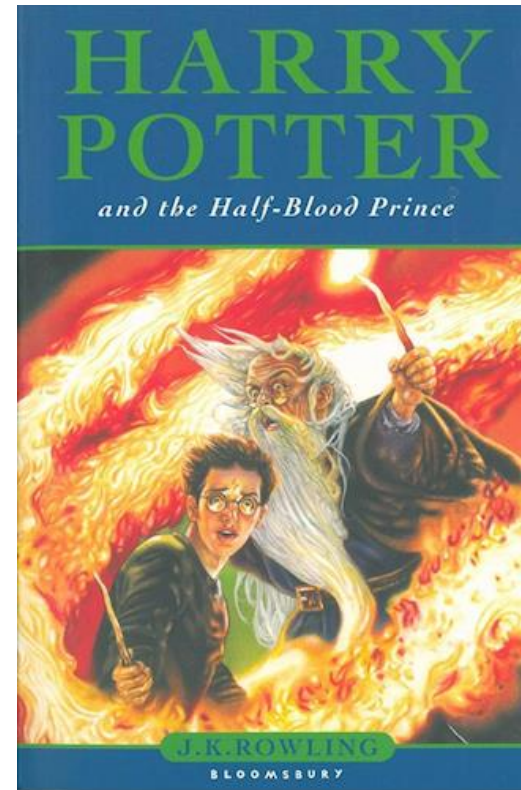
**Cost:** 1 point

*The acceptance test can be written on the back of the index card*

# Exercise

## Possible Solution

- Precondition ->  
"Harry Potter & The Half-Blood Prince" is already created in the system
- Open the Search Window
- Select to search by title
- Key in "Harry Potter & The Half-Blood Prince"
- Select to show result as list



*The acceptance test can be written on the back of the index card*