

Overview

SDLC

Software Development Life Cycle

Methodology

A teachable and repeatable process for achieving goals.

The two fundamental approaches to SDLC planning are Waterfall and Agile.

Waterfall - A linear point of view.

A waterfall point of view sees far into the future. It believes that we can plan and predict far into the future. In some cases this is true. In some cases it is necessary. Urban planning. Building a skyscraper or a housing development.

Perhaps building software that will be frozen in an embedded system like a smart phone or a car.

Agile - A user steered point of view.

An agile point of view is a user centric point of view.

An agile process:

- involves the user early and often
- speaks in the users language
- delivers features new features frequently
- learns from itself and is self correcting
- is iterative and incremental
- adapts to business realities and uncertainty

This allows the team to deliver valuable features early and ongoing at a sustainable rate.

Agile Planning

Epics, stories, tasks, and spikes.

Project is made up of EPICs that contain User Stories that contain tasks.
Only tasks can be estimated. Only tasks can be marked completed.

The planning process of defining the stories includes the customer who can answer questions that come up during planning.

User Stories - The who and why behind a feature.

Backlog - A priority ordered list of good ideas that would be nice to do.

Iterations - Arbitrary blocks of time used for planning purposes.

Iterations are typically one to four weeks in length. Some consider three ideal.

Estimation - Planning Poker

The team estimates the stories together so as to identify differing views, share information, and come to a consensus. Estimates are made for every story that is being considered for inclusion in the next sprint.

Estimates are made for each Story and are made in points or shirt sizes such as S=1, M=2, L=3, XL=5, XXL=8

These can be done with playing cards to represent the numbers and optionally provide anonymity to the bidders.

Velocity - Rate of change over a period of time.

Velocity is the measure of team performance that self adjusts over time.
It is a moving average of the last N iteration actual story points completed.

Velocity is to be used as a measurement of team capacity; not as a measurement of individual or team performance.

Initially the team guesses at how many story points can be completed in this first iteration.

How many if you only have two people and one week?

Planning Example:

EPIC 1:

WEB SITE

Story 1 - core site:

As a Photographer (Role);

I want to share my content on my own public site.

so I can (Goal);

change the world.

Tasks:

1. create a folder for the project
2. create HTML markup in index.html
3. code site header structure with placeholder text
4. code site footer structure with placeholder text
5. code site content structure with placeholder text
6. create style sheet named main.css with initial distinct styles for each semantic tag
7. create placeholder for interactivity in main.js with an empty “ready” function
8. create a placeholder for data in data.js with an empty array/list named data

Story 2 - display photos:

As a Photographer (Role);

I want to be able to display photos to the site

so I can (Goal);

convey my point of view.

Tasks:

1. create a folder named media for the images
2. add placeholder photos to the folder
3. add a container div with an id of gallery inside of the content tag
4. add a HTML IMG tag inside the gallery tag for each photo
5. set their src attribute for each img tag
6. add a style to main.css to style img tags that are children of gallery
7. make that style limit the maximum size of each thumbnail image to 30%

8. create a placeholder for object inside of the data array defined in data.json

Story 3 - upload photos:

As a Photographer (Role);

I want to be able to upload photos to the site

so I can (Goal);

have an online archive.

...

Exercises:

TODO: Add tasks for Story 3

TODO: Add tasks for Stories and tasks to flesh out the product requirements.

Ask an clarifying questions.

Extra Credit

Estimate the tasks in points as shirt sizes S=1, M=2, L=3, XL=5, XXL=8

If its a given that a team member can complete an average of five story points per week and you have ten team members for three weeks before the first release.

How many story points can be completed in this first iteration?

How many if you only have two people and one week?

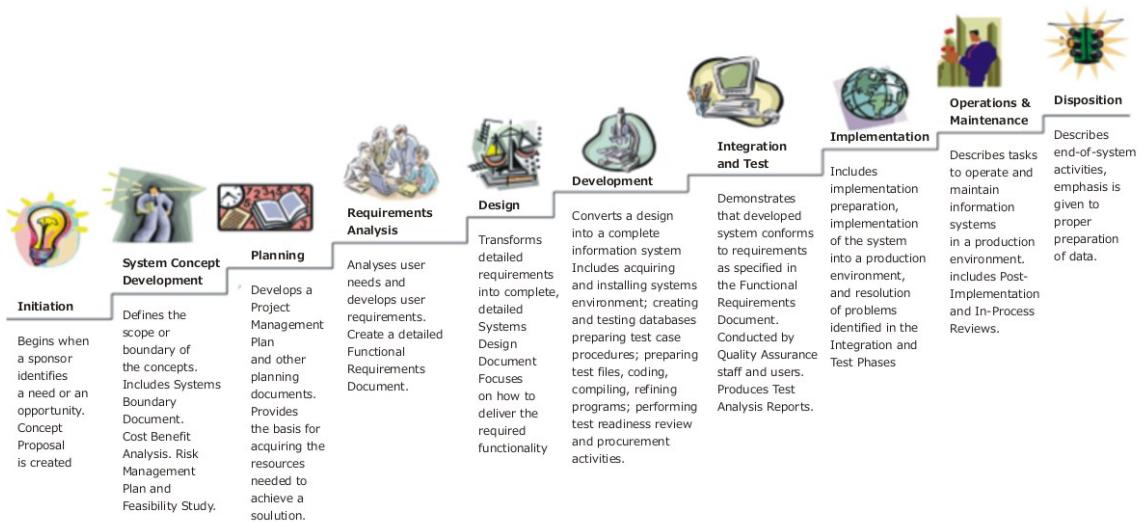
Velocity is the measure of team performance that self adjusts over time.
It is a moving average of the last N iteration actual story points completed.

Velocity is to be used as a measurement of team capacity; not as a measurement of individual or team performance.

Appendix A- Images

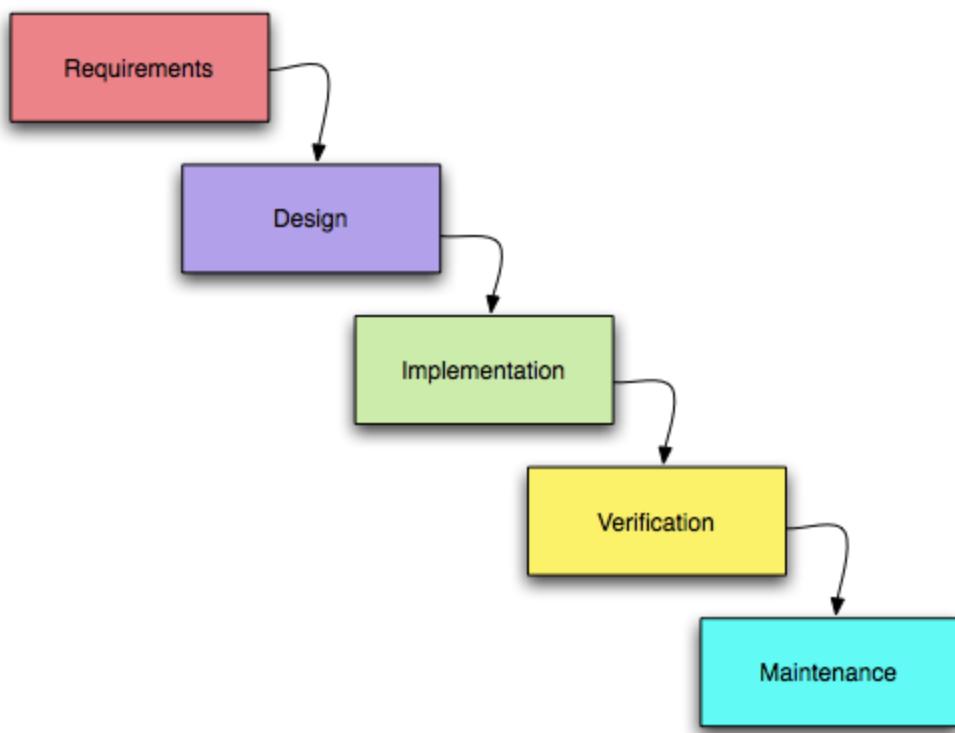
SDLC

Systems Development Life Cycle (SDLC) Life-Cycle Phases

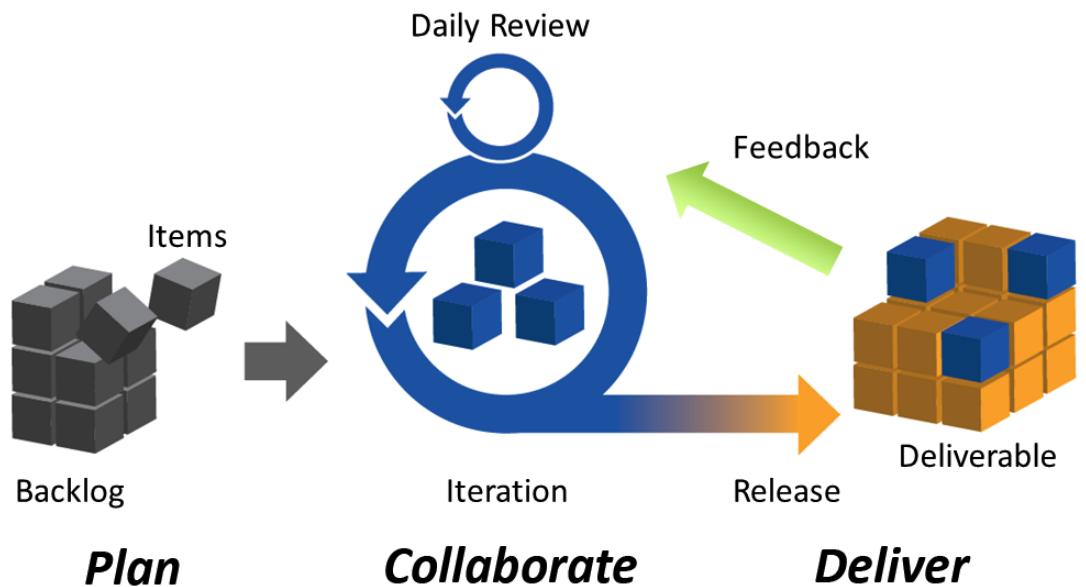


http://en.wikipedia.org/wiki/Systems_development_life_cycle#mediaviewer/File:Systems_Development_Life_Cycle.jpg

Waterfall - Linear (old school, one-pass, fragile)



Agile - Iterative (new, learning, self healing)



Agile Project Management: Iteration

http://upload.wikimedia.org/wikipedia/commons/5/50/Agile_Project_Management_by_Planbox.png

Kanban (Flow Board)



<http://upload.wikimedia.org/wikipedia/commons/d/d3/Simple-kanban-board-.jpg>

Appendix B - Links

http://en.wikipedia.org/wiki/Systems_development_life_cycle

<http://www.agilemanifesto.org/>

http://en.wikipedia.org/wiki/Technical_debt

http://en.wikipedia.org/wiki/Agile_software_development

http://en.wikipedia.org/wiki/Scrum_%28software_development%29