SWEN90016

Software Processes & Project Management

SDLC Process

Language Research Case Study

Assignment 1

2020– Semester 1

Tutorial 2

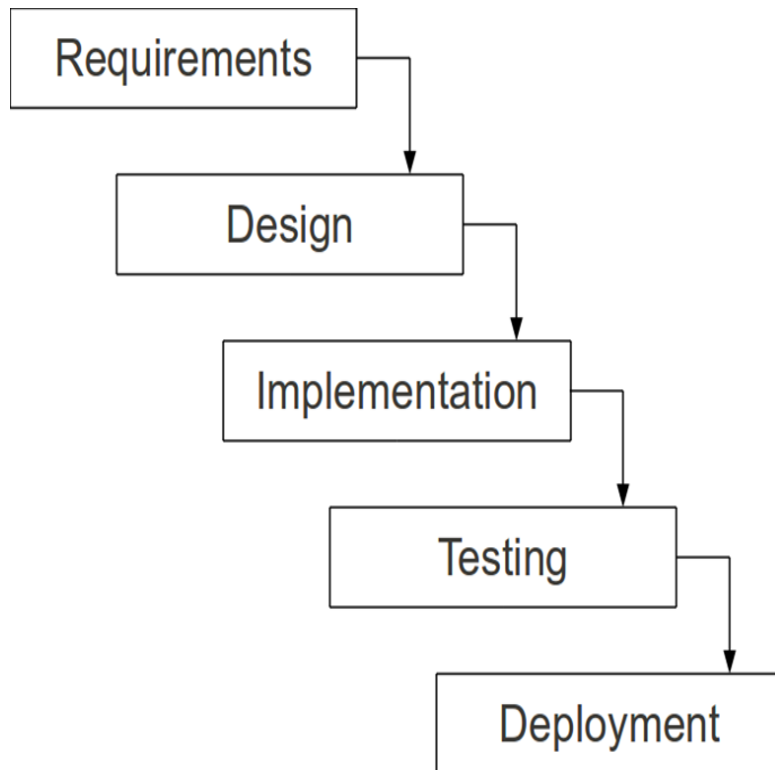Understand the differences between the SDLC
and when to use which one

Waterfall

What are the Advantages?

- Simple and easy management
- Rigid and sequential
- Documentation produced
- Requirements stable and precise
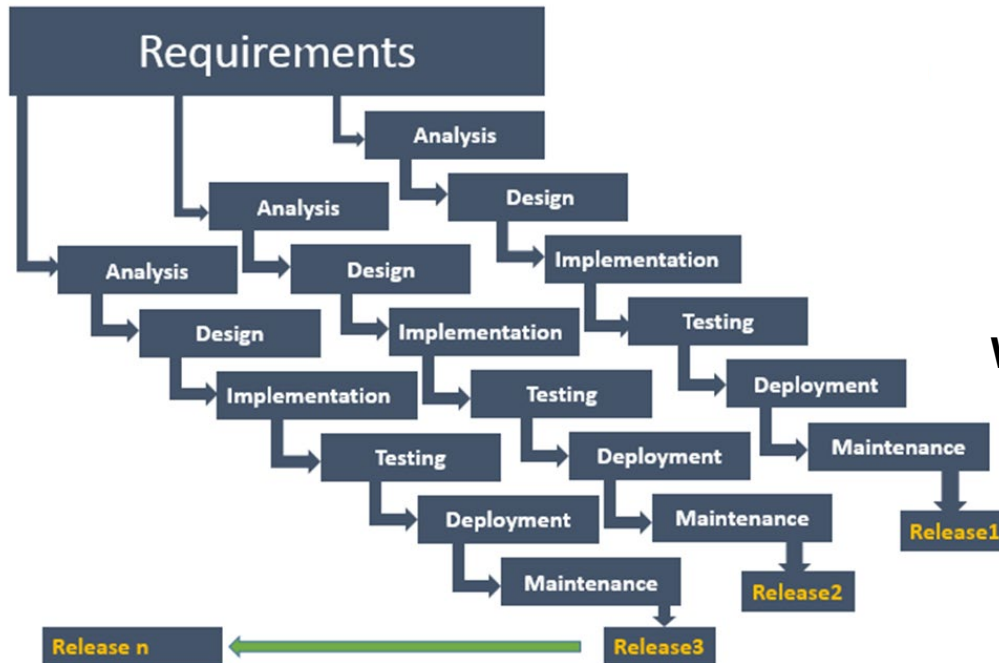
What are the Disadvantages?

- Bad news known late in process
- Client feedback known late in process
- Discourages change
- Documentation not valued
- Risks and changes have big impact

Incremental

Requirement - partition into segments
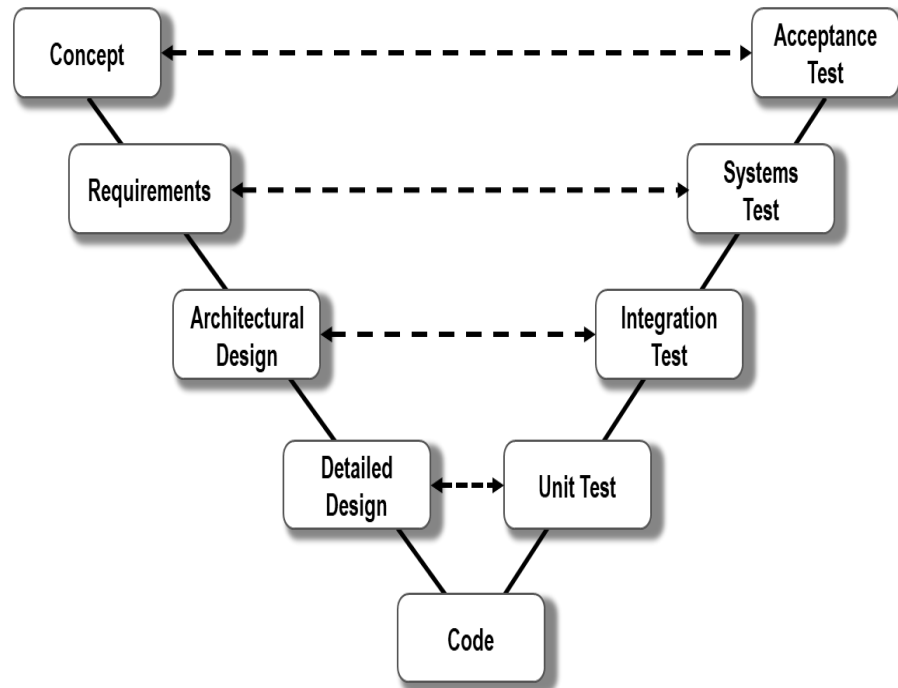
Releases - mini waterfall process

Integrate modules

What are the Advantages?

- Smaller, easier modules
- Initial modules released earlier
- Client feedback known earlier
- Change has less impact
- Requirements stable and precise

What are the Disadvantages?

- Management complexity
- Increased cost
- Partition skill
- Integration risk
- Rigid within each partition

waterfall model plus defined artifact deliverable
development stage ← → testing phase

What are the Advantages?

- Simple and easy management
- Rigid and sequential deliverable
- Documentation produced
- Requirements stable and precise

What are the Disadvantages?

- Requires discipline
- Bad news known late in process
- Client feedback known late in process
- Discourages change
- Test artifacts are expensive
- Risks and changes have big impact

Which of the following are an example of a formal model? Choose all that are correct.

V-model

Agile

Incremental

Hybrid

Waterfall

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⬚ When poll is active, respond at **PollEv.com/estherrotimi653**
⬚ Text **ESTHERROTIMI653** to **22333** once to join

When should you choose a Formal Model? Choose all that are correct.
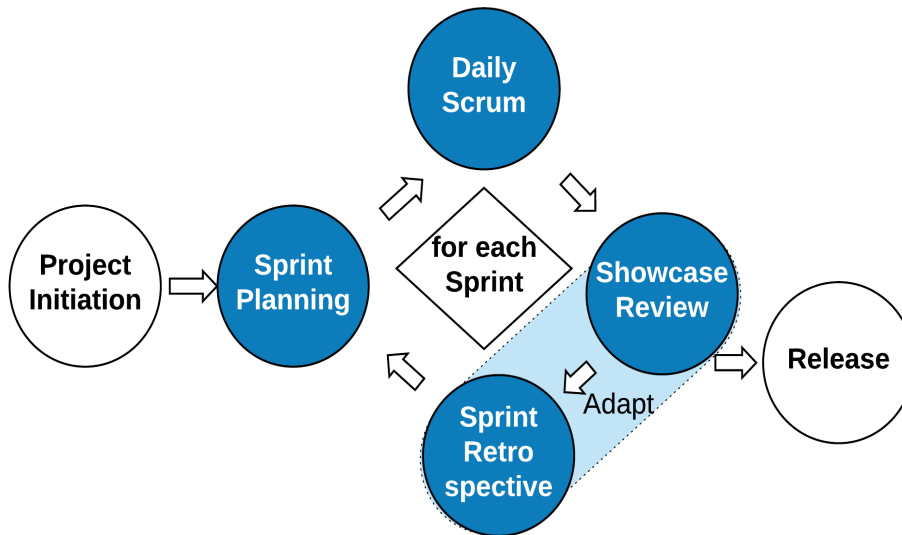
Stable, precise and known requirements

Customer gives time to project

Mature technologies and tools

Client has a prescriptive model established

Scrum: method to organize working teams
XP: method to improve code quality

What are the Advantages?

- Transparent productivity due to fast releases
- Focus on client satisfaction
    - Embraces change
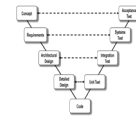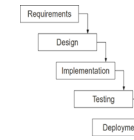   - Requirements emerge
- Efficient and simple code

What are the Disadvantages?

- Requires experience of ceremonies
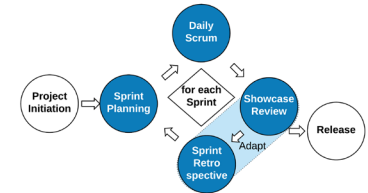- Requires teamwork skills
- Giant "TODO" list lacks design overview

When to choose Formal Models?

- Customer knows what they want at the start
- Stable, precise and known requirements
- Change is not expected
- Mature technologies and tools

When to choose Agile Models?

- Customer gives time to project
- Requirements continue to emerge
- Change is welcome

When to choose a hybrid model?

- Client has a prescriptive model established

When should you choose agile? Choose all that are correct.

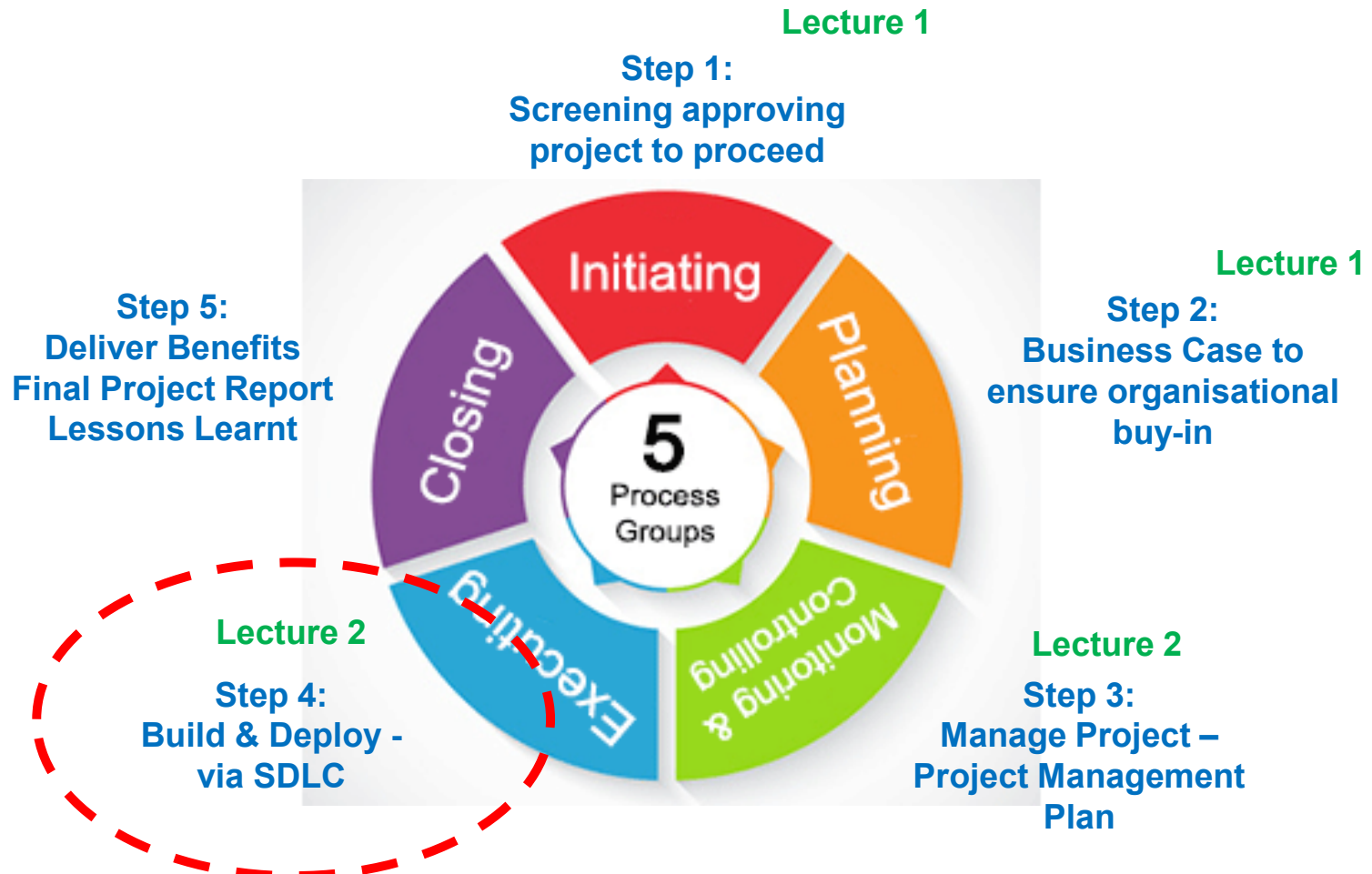Requirements continue to emerge

Customer gives time to project

Mature technologies and tools

Change is welcome

Explore the relationship between projects and processes

Discuss in small groups and share ideas.

L2.4 – SDLC is a Process

Lecture 1

Step 1:
Screening approving
project to proceed

Step 5:
Deliver Benefits
Final Project Report
Lessons Learnt

Lecture 1

Step 2:
Business Case to
ensure organisational
buy-in

Lecture 2

Step 4:
Build & Deploy -
via SDLC

Lecture 2

Step 3:
Manage Project –
Project Management
Plan

Source: www.pmi.org/pmbok-guide-standards
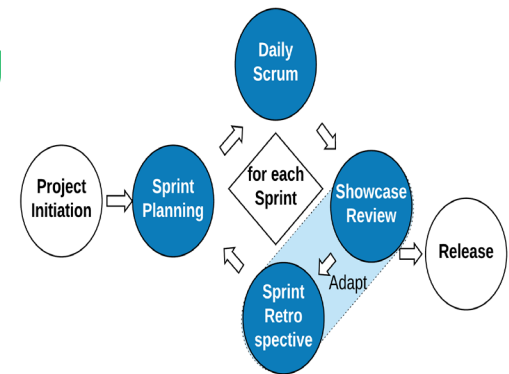
Case Study 2 –Language Research Tool Project

In groups of 4- Determine the goals & key characteristics

Goal
- Efficient, open & published language learning
- Cultural preservation

Key Characteristics
- Data centric, data integrity, data sharing
- Complex privileges & roles
- Global, distributed, interoperable

Case Study 2 –Language Research Tool Project

What are the challenges and risks?

Challenges: what would make this project difficult?

– integrated, trust-worthy, searchable data

Risks: what could make this project fail?

– poor quality data and duplicate data silos

Get into 2 groups, **discuss** SDLC processes &

activities

1) Consider the project, people & technology
   1) Evaluate the team and project constraints.

2) Evaluate multiple SDLC models
   1) Identify the advantages and disadvantages
   2) Consider the outcomes and risks

3) Justify an effective SDLC process

   1) Defend your choice of SDLC

   2) List the activities done

- Formal: Requirements Specification
- Agile: Product Backlog

Due: Thursday, 2nd April 2020

Marks: 20%

What: Figure out an appropriate SDLC for a given Case Study

How to do well:

1. Critical analysis of Case Study characteristics and risks
2. Critical analysis of each SDLC's processes
3. Balance the pros and cons and justify your choice of SDLC

Any Questions?

Next tutorial: Agile Scrum SDLC

Thank You!