# Why Process?

# Why Process?

## Agile values and principles & project

- How Agile values and principles can be applied in practical ways to a project?
- A process is a good foundation to apply these principles.
- "A process organizes the work of people into distinct "phases" or "stages" to develop a software product."

## Some phases of software development

- planning the project
- writing the code
- testing the software
- maintaining the product

(**Note**: there could be many ways to structure a development process.)

# Quiz

**If you were going to create a process for making a pizza, what do you think the phases might be?**

- A. Crust, Sauce, Cheese, Pepperoni.
- B. Planning, Preparation, Assembly, Cooking.
- C. Dial, Order, Eat, Leftovers.
- D. Make, Bake, Eat, Eat Leftovers.

# Quiz

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# Phase

## Common phases of different processes

- Although there are many different processes for organizing the work on a product through its lifetime.
- But they generally share the high level notion of a phase.

## Examples of phases are:

- specification
- design & implementation
- verification & validation

# Phase

## Specification

Specification is where the idea for the product is conceived.
You will know the specification phase has been achieved when you can define what the software will do.

## Design & Implementation

Design & Implementation is figuring out the optimal way to structure the software
which allows effective design and coding to begin.

## Verification & Validation

Verification & Validation is where you test the software for bugs
and ensure that the system is delivering what the client needs.

# Phase

## Phase & Why Processes?

- Processes are necessary to organize your development, and make sure that you are completing things in a logical order.
- They also ensure that steps are not missed or overlooked.
- Processes also provide clarity as to where you should start your project.
    - -> Software development is pretty daunting when you don't know where to begin.

# Quiz

## Quiz context

You are the product manager for a project that is developing a new video game.

Your team is responsible for the character selection screen.

## Some of the tasks your team needs to complete are

- A. writing tests for selecting a character,
- B. planning what the characters look like,
- C. writing the source code for multiplayer selection,
- D. and executing tests for changing the color of characters.

# Quiz

Which of these tasks would be in the verification and validation phase?

- A. Writing tests for selecting a character.
- B. Planning what the characters will look like.
- C. Writing the source code for multiplayer selection.
- D. Executing tests for changing the color of characters?

# Quiz

## Which of these tasks would be in the verification and validation phase?

- ✓ A. Writing tests for selecting a character.
- • B. Planning what the characters will look like.
- • C. Writing the source code for multiplayer selection.
- ✓ D. Executing tests for changing the color of characters?

## Explanation

Writing tests for selecting a character and executing tests for changing the color of characters, both help to assess whether the product works the way it's intended to.

### Recall: Verification & Validation

Verification & Validation is where you test the software for bugs and ensure that the system is delivering what the client needs.

# How about a project without process?

## What is a software development like without a process?

### Ad Hoc development illustration 1/2

- have a great idea for an app
- simply start coding straight from imagination (like sitting at a keyboard and expecting a great novel to type itself out from your fingertips)

### Ad Hoc development illustration 2/2

- program as ideas pop into your head
- spend many hours developing ill-conceived features
- end up changing your mind midway through development

# How about a project without process?

**Issues with Ad Hoc development**

- primary concern – poor design
- Starting over ? Time is valuable.
- -> producing a good product on time may be impossible

# Why Process?

## Benefits of following a well-designed process

- lets the manager be able to monitor all aspects of a project.
- help to effectively set work expectations, manage risks, avoid wasting resources, and deliver a well thought out product.
- lets developers be in a better position to weed out bugs or poor design early in the development when they understand the process.
- lets the team working together towards a common goal – save time and money.
- make rules and responsibilities clear for everyone on the development team.
- enables everyone to know what to expect.