- Principles of software Engineering Summary/Questions
- Intro to Ux/Product Management summary/Questions
- Other
- course topics, class demos and course labs cover 90%-95% industry javascript, html, css software engineering development/product management, fundamentals, tools and workflows.

# Summary Workflow and Examples:

- Project development ie: website development workflow
- Software Engineering
  - Tools, vs.code, browser devtools
  - Command terminal
  - User stories, fixes, other requirements
  - Team development
    - Github
  - Code review/quality tools
  - Code best practices
    - Object Oriented programming

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- Code diagrams wireframe
- Database / table diagrams UML
- Project management
  - Project management tools Jira, Other
  - Quality Assurance teams verify/test use cases and other requirements
  - Daily, weekly meetings, scrums
  - Product management tools
    - Measure user stories, requirements, fixes
    - Measure milestones
    - Measure software quality
    - Measure software time,cost,quality
      - Measurement tools and diagrams
        - Ghant, Prat, Other
  - System Development Life cycle
    - Requirements
    - Specifications
      - Data flow
      - Database relationship UML
      - In-memory code diagrams State diagram
      - Code best practices
        - Re-use code in new projects
        - Update code without modifying code in production s
        - Other patterns and best practices

- Design
  - ui/ux design
  - Prototyping
- Implementation
  - Reusable code, libraries
- Verification
- Testing and Maintenance
- Team development
  - user stories and other requirements
  - Agile tools, Jira
  - Team meetings daily, weekly
    - Discuss user stories and other requirements
      - Storyboards group of requirements
      - Epic more detailed user stories
    - Agile incremental updates, dail, weekly, monthly
    - Scrum daily weekly meetings
- Software development user stories and requirement measurement tools
  - (requirements, specifications, user interaction, testing, customer feedback, prototype, client/customer/user, developer, risks/errors, quality)
  - Sawtooth model
  - V-model
  - Spiral model
- Product management
  - Product manager
  - Customer engagement
- Customers accessing website
- Development operations team DevOps
  - Deploy application to different servers / Websites
  - Development server / Website
  - Quality Assurance server / Websites
  - Production servers / Websites
  - Monitor website

# Software development terms summary

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UML stands for Unified Modeling Language, which is a standardized visual modeling language used to specify, visualize, construct, and document the artifacts of software systems. It helps in representing complex system designs through various types of diagrams.

Object-oriented programming is a programming (OOP) paradigm based on the concept of objects, which can contain data and code: data in the form of fields, and code in the form of procedures. In OOP, computer programs are designed by making them out of objects that interact with one another

#### Polymorphism

https://www.w3schools.com/java/java\_polymorphism.asp#:~:text=Polymorphism means "many forms"%2C,out.

# Java Polymorphism

Polymorphism means "many forms", and it occurs when we have many classes that are related to each other by inheritance.

Like we specified in the previous chapter; Inheritance lets us inherit attributes and methods from another class. Polymorphism uses those methods to perform different tasks. This allows us to perform a single action in different ways.

For example, think of a superclass called Animal that has a method called animalSound(). Subclasses of Animals could be Pigs, Cats, Dogs, Birds - And they also have their own implementation of an animal sound (the pig oinks, and the cat meows, etc.):

Product management is the business process of planning, developing, launching, and managing a product or service. It includes the entire lifecycle of a product, from ideation to development to go to market

Assignment Questions references and article and video of examples

user store

Object Oriented Design Principles: Encapsulation, Abstraction, Inheritance, Polymorphism

object oriented programming

Polymorphism - many With polymorphism- what is a child class instance vs a parent? QA Engineers

The root cause of a malfunction of a system

Encapsulation

Gantt

State Diagrams

also course chat or email summary of questions

QA - quality assurance - test the software gantt chart summary

poject1

feature-a - timeline feature-b - timeline feature-c - timeline

feature-4 - timeline

1 2 3 4 5

feature-a - timeline feature-b - timeline feature-c - timeline feature-4 - timeline ### in-Class practice exercises ### in-Class Demo project

- user stories
- wireframe
- project website layout and pages

#user story demo

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User stories are brief, simple descriptions of a feature or functionality from the perspective of the end user.

Who - What - Why
User, request, why
As a [type of user], I want [an action] so that [a benefit].

#### Examples:

# **User Registration:**

As a new user, I want to be able to register with my email and password so that I can access my personal account.

# **Shopping Cart:**

As a customer, I want to add items to my shopping cart so that I can purchase multiple items at once.

Personal website user stories example

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As a User, I would like to display a list of hobbies information on the home page.

As a User, I would like to display summary information about the website on the about page.

As a User, I would like to enter contact information such as name, email and comments on the contact us page.

As a user, Please provide a navigation menu to allow users to goto different webpages, for example, home page, contact us page, and about pages.

#wireframe ie: mockup demo

- Diagram of general features of each website page . ie: mockup
- text base wireframe

- drawing tool wireframe
index page
home   about   Contact us
[image]
item 1 item 2 item 3
about
description
[image]