Software Development

Project 1

Module 05

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What is a project?

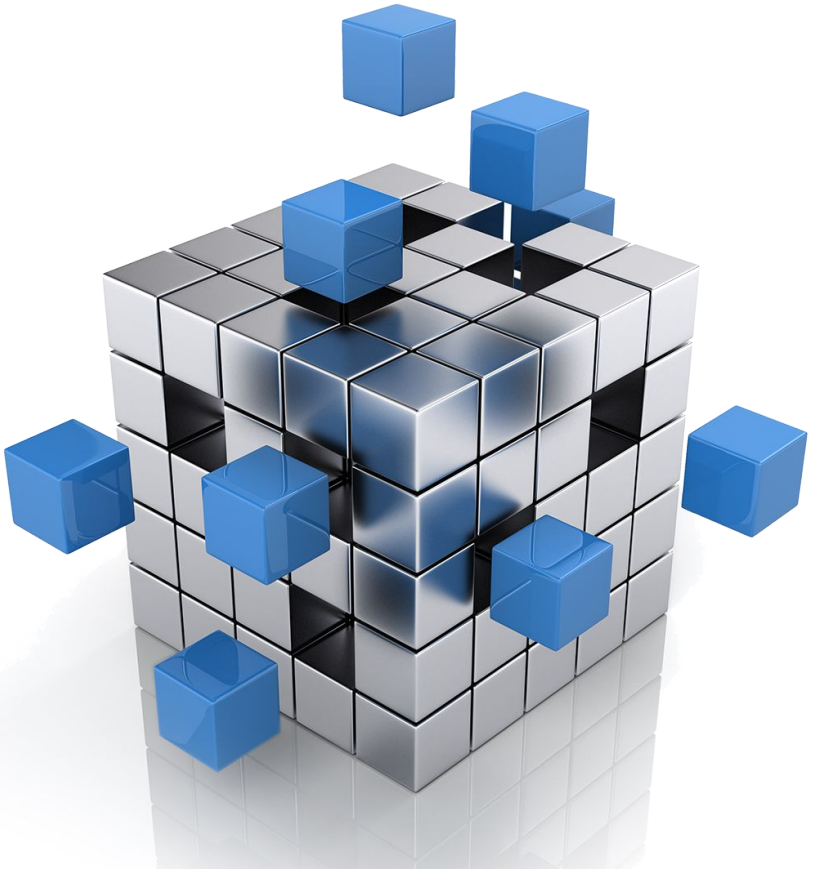
Project: Any undertaking, carried out individually or collaboratively and possibly involving research or design, that is carefully planned (usually by a project team) to achieve a particular aim.

How do we carefully **plan a project**?

Project Management

The practice of initiating, planning, executing, controlling, and closing the work of a team to achieve specific goals and meet specific success criteria at the specified time.

The primary challenge of project management is to achieve all of the project goals within the given constraints.



wikipedia.org

What is the definition of **agile**?

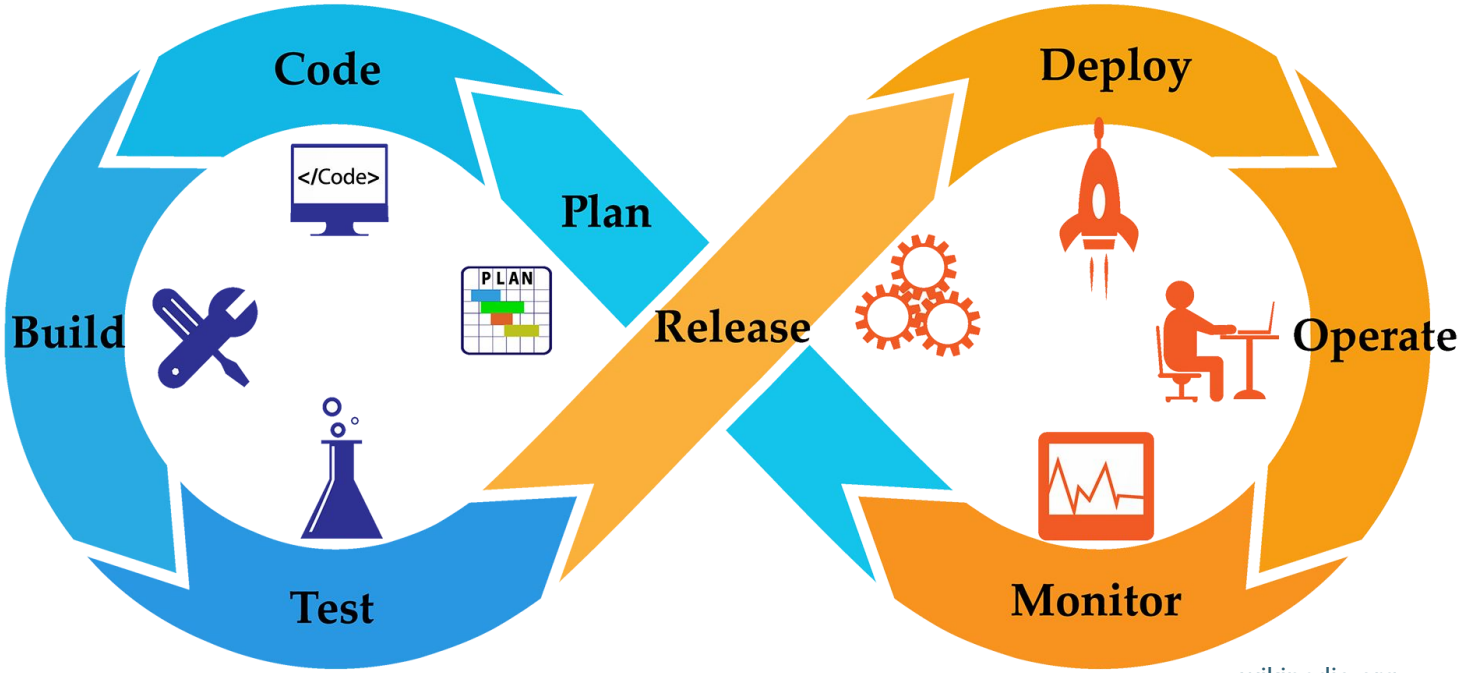
agile [aj-uhl, -ahyl]

- Quick and well-coordinated in movement; lithe: an agile leap.
- Active; lively: an agile person.
- Marked by an ability to think quickly; mentally acute or aware: She's 95 and still very agile.

What is agile **software development**?

Agile Software Development

Agile software development is an iterative approach to **software development**.



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Agile Software Development

Deliver Value

Teams deliver value to their customers faster by working incrementally rather than working towards a big launch.

Respond to Change

Teams improve and respond to change by continuously evaluating project plans, requirements and user needs

What is **iterative development**?

Iterative and Incremental Development

Working software is the primary measure of progress

The Agile Manifesto: The Four Foundational Values

Individuals and interactions	**over**	**Processes and tools**
Working product	**over**	**Comprehensive documentation**
Customer collaboration	**over**	**Contract negotiation**
Responding to change	**over**	**Following a plan**

What is an **MVP**?

Minimum Viable Product

A product with just enough features to satisfy early customers and provide feedback for future product development

Minimum Viable Product:

Product Vision:

wikipedia.org

How do we determine our **MVP**?

Determining a Minimum Viable Product

Ask Questions!

- Who is your audience?
- What is the problem that the product will address?
- How does the product solve that problem?

What is a **user story**?

User stories

As a `<type of user>` | Who are we building this for? | AS A **marketing analyst**

I want `<some goal>` | What is the user trying to achieve? | I WANT to **see referral traffic**

(so that `<benefit>`). | Why do they want to achieve this? | SO THAT I can **convert more leads**

User stories

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(so that `<benefit>`).	Why do they want to achieve this?	SO THAT I can **convert more leads**

What is **acceptance criteria**?

Acceptance Criteria

GIVEN some precondition

GIVEN I **am an authenticated user**

WHEN I do some action

WHEN I **request a range of referral traffic**

THEN I expect some result

THEN a **chart is generated**

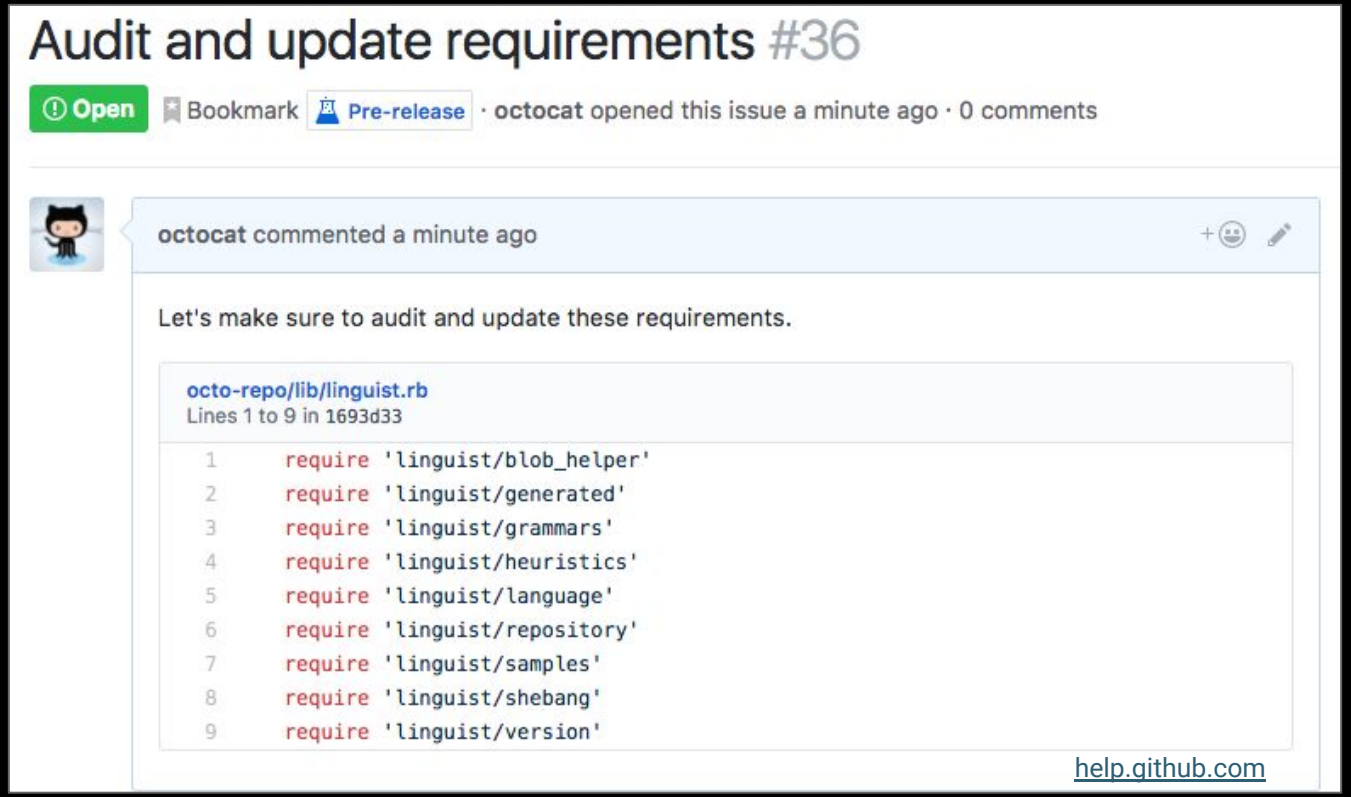
Acceptance Criteria

GIVEN some precondition	GIVEN I **am an authenticated user**
WHEN I do some action	WHEN I **request a range of referral traffic**
THEN I expect some result	THEN a **chart is generated**

What is an **Issue**?

Issues

Use issues to track ideas, enhancements, tasks, or bugs for work on GitHub.



Instructor **Demonstration**

Git Repo Setup

Activity:
Git Repo Setup

In this activity, you will:

1. Create a repository and set up a `.gitignore` file.
2. Protect the `main` branch.
3. Add collaborators to the repository.

Suggested Time:
15 Minutes

Git Guide

Git Repo Setup

Activity:
Git Collaboration

In this activity, we will learn how to effectively collaborate with other developers on a web application that is hosted on GitHub.

Suggested Time:
10 Minutes

Instructor **Demonstration**

GitHub Issues

Activity:
User Stories

User stories help provide context for a development team and their efforts moving forward

Suggested Time:
5 Minutes

Activity:
User stories

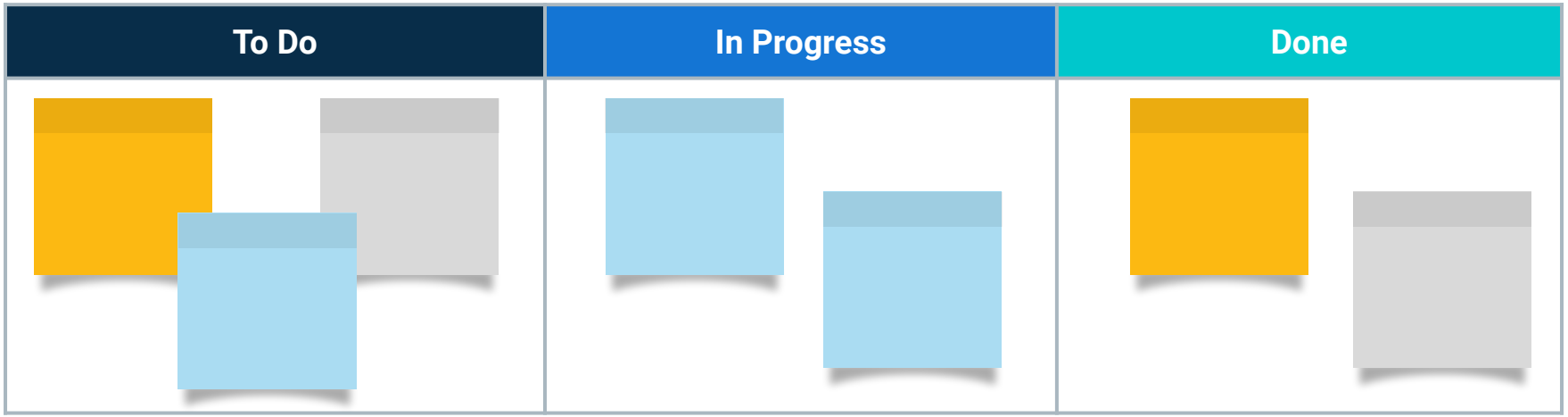
In a markdown file or with a pen and piece of paper, create a user story for a mock persona using one of the following prompts:

1. A web application that keeps track of a company's payroll.
2. A mobile application that finds nearby restaurants.
3. A reminder app that keeps track of important tasks

What is **kanban**?

Kanban

Kanban is a project management tool that visualizes work through cards representing User Stories or Issues. In their simplest form, Kanban boards are broken into three columns:



Cards begin in the To Do column and are moved from left to right as work is started and completed.

Instructor **Demonstration**

GitHub Projects

Activity:
GitHub Projects

Kanban boards help developers visualize work and keep track of the status of issues.

Suggested Time:
10 minutes

Activity:
GitHub Projects

1. Navigate to github.com and create a repository.
2. Create a new Github project.
3. Create a card called “Create landing page” and move it from the “Backlog” column to “In progress”.
4. Create a GitHub Issue called “Fix broken button” and attach it to your new project.

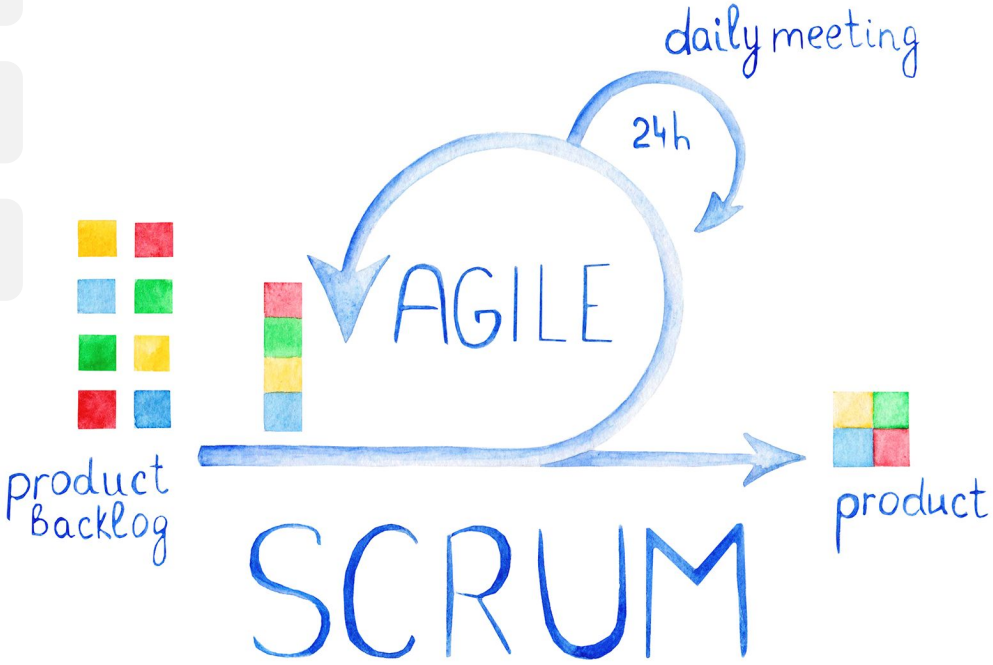
What is **daily scrum**?

Stand-Up Meetings

01 What was accomplished?

02 What are your goals?

03 Are there any obstacles to achieving your goals?



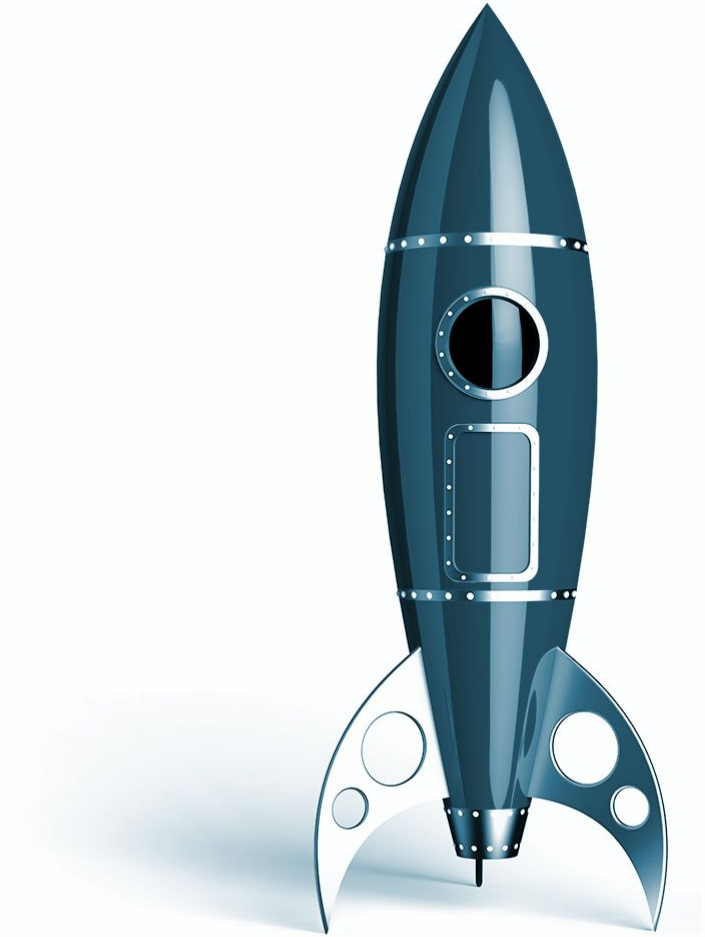
Project Timeline

First Day of Module 05	• Divide into groups. • Write a user story. • Create a wireframe. • Create a user flow diagram. • Submit project proposal for approval.
Modules 05–06	• Continue project development. • Prepare for presentations.
Last Day of Module 06	• Give presentations!

Get Professional

Projects are portfolio pieces

Use Project Week as an opportunity to **push yourself** and prove what you know.



Project Requirements

01 Must be responsive and have a polished UI

02 Must use client-side storage to store persistent data

03 Must be interactive (i.e: accept and respond to user input)

04 Must meet good quality coding standards (indentation, scoping, naming, etc.)

05 Use a CSS framework (see next slide)

06 Must include at least one modal (instead of alert, prompt, or confirm methods)

07 Have a quality README

08 Must be deployed to GitHub Pages

CSS Frameworks

One of the requirements for this project is to incorporate a **CSS framework** into your application.

There are different ways to add these frameworks to your applications, but for the purposes of this front-end project, you'll need to use the **CDN** option.

CSS Frameworks

This is just a list to get you started. Feel free to use one not included in this list!

01 Bootstrap

02 Tailwind CSS

03 Materialize

04 Pure CSS

05 Semantic UI

06 Foundation

07 Bulma

Must be deployed to GitHub Pages

Presentation Requirements

You will be responsible for preparing a formal, 10-minute presentation that covers the following:

Elevator pitch	A one minute description of your application
Concept	What is your user story? What was your motivation for development?
Process	What were the technologies used? How were tasks and roles broken down and assigned? What challenges did you encounter? What were your successes?
Demo	Show your stuff!
Directions	For Future Development
Links	To the deployed application and the GitHub repository

Grading Requirements

Your project will be evaluated on the following:

01 Technical Acceptance Criteria

02 Concept

03 Deployment

04 Repository Quality

05 Application Quality

06 Presentation

07 Collaboration

Today’s Project Checklist

Create a one page proposal that contains the following:

01 Project title

02 Project description

03 User story

04 Wireframe or sketch of the design

05 Rough breakdown of tasks