Week 2:

* Agile Properties
  + Empowered Teams: Cross-functional teams own their work, fostering accountability, collaboration, and a sense of purpose – diverse perspectives lead to innovative solutions and quicker problem solving. Giving the teams authority, resources, a d trust to make decisions about their work without needing constant approval from a higher up
  + Continous learning: Embraces experimentation and learning from both successes and failures. Growth mindset
  + Reduced Risk: early identification and mitigation of issues through iterations
  + Budget Friendly
* Where is agile used
  + Technology and SaaS: Used by startups and established giants like Netflix. Agile fuels rapid innovation
  + Automotive
  + Healthcare
* Agile
  + A mindset that enabes organizations to be more responsive to change
  + Is an iterative approach to project management and software development that helps teams deliver value to customers faster, respond to change more quickly.
* 4 core
  + Individuals and actions over processes and tools
    - Agile focuses on people working together effectively than rigid processes and tools. Self-organizing teams
  + Working software over comprehensive documentation
    - Working software is the primary measure of progress rather than extensive documentation. Just enough documentation
  + Customer collaboration over contract negotiation
    - Customers and developers collaborate closely with shared project ownership rather than contractually define roles. Requirements evolve based on feedback
  + Responding to change over following a plan
* Agile Manifesto
  + Aearly and continuous delivery of valuable software
  + Harness change for the customers competitive advantage
  + Deliver working software frequently
  + Business people and developers work together daily
  + Build projects around motivated individuals, give them the environment and support they need
  + Face-to-face conversations are most effective for conveyinh information
  + Promote sustainable development
  + Continuous attention to technical excellence and good design
  + Simplicity
  + Team reflects on how to become
* Agile methodologies
  + Scrum
    - Iteratove and incremental framework
  + Kanban
    - Focuses on visualizing workflow and limiting work in progress
  + Extreme programming
    - Emphasizes customer satisfaction and engineering practices
  + Others
* Roles
  + Scrum Master
    - Process expert
    - Facilitates ceremonies (meetings, etc)
    - Removes roadblocks and hurdles
    - Ensures teams meets objectives
  + Product Owner
    - Business Interface
    - Provides Strategic Direction
    - Creates user stories/backlogs
    - Key decision maker
  + Delivery Team
    - Includes developers, testers, architects, UX, ect
    - Execution team
    - Subject matter experts
* Concepts
  + Sprint
    - Fixed period of time in which work gets done
    - Duration typically 2-3 weeks
    - Design, test, develop
    - Delivers a working increment
  + Product Backlog
    - Prioritized list of whay needs to be done
    - User Stories, bugs and issues, tasks
    - Prioritized regularly by Product Owner
  + Backlog Grooming
    - Done by the product owner working with the team as well as stakeholders
    - Product Owner cleans, organizes, and prioritizes the existing backlog
  + Release and Sprint planning
    - Includes whole team
    - Based on prioritizing items
* Ceremonies of the Agile Process
  + Standups
    - Daily meeting
    - Around d 10-15 mins
    - Simple and informal
    - Delivery team identifies any roadblock
    - Scrum Master responsible for removing roadblock
  + Sprint Review
    - Attened by Scrum master, Product Owner, and Delivery Team
    - Done at spirnt completion
    - Team reviews each user story
    - Results of user acceptance testing, collect feedback, decision on deployment readiness
  + Accpetance
    - What should be implemented to satisfy the user story
  + Sprint Planning
    - What functionality should be implemented in that sprint
    - Identifies people responsible for delivering
    - Product owner is key decision maker
  + Retrospective
    - Occurs after each sprint
    - Serves as reflection on the process
    - What went wellm what went wrong
    - Key ceremony for continuous improvement
* Case Study
  + Cyberguard Dynamics
* Project goals
  + - Enhanced threat detection: Using Ai to identify and respond to security threats
    - Dataa protection
    - Regulatory Compliance: Meeting industry standards and legal requirements for data security
    - Efficiency
  + Key Features
    - Real time monitoring: continuous analysis of network traffic
    - Anomaly detection: identifying unusual patterns
    - Predictive analysis: Anticipating potential securitu threats based on historical data
    - Automated response: Instantaniously addressing identified threats to mitigate damage
    - User Behaviour Analysis: Monitoring for insider threats
    - Compliance reporting: Generating reports for compliance with industry standards
  + Epics, Stories, Tasks, Bugs, and Subtasks
    - Epic: Large initiative
    - Story: Feature or requirement in non-technical terms
    - Task: a work item
    - Bug: Problem or error
* Product Owner is a bridge between the company and the development team