



# Initiating and Integrating Software Development Projects: Industry Insights and Best Practices

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# Session Outline

**Initiating a Software Development Project**

**Integrating Software Components**

**Industry Insights**

**Q&A and Discussion**



# Initiating a Software Development Project

**Understand Software Development Life Cycle (SDLC) and its key phases**

**The importance of project initiation and planning.**



# What's SDLC?



Planning



Development



Analysis



Testing

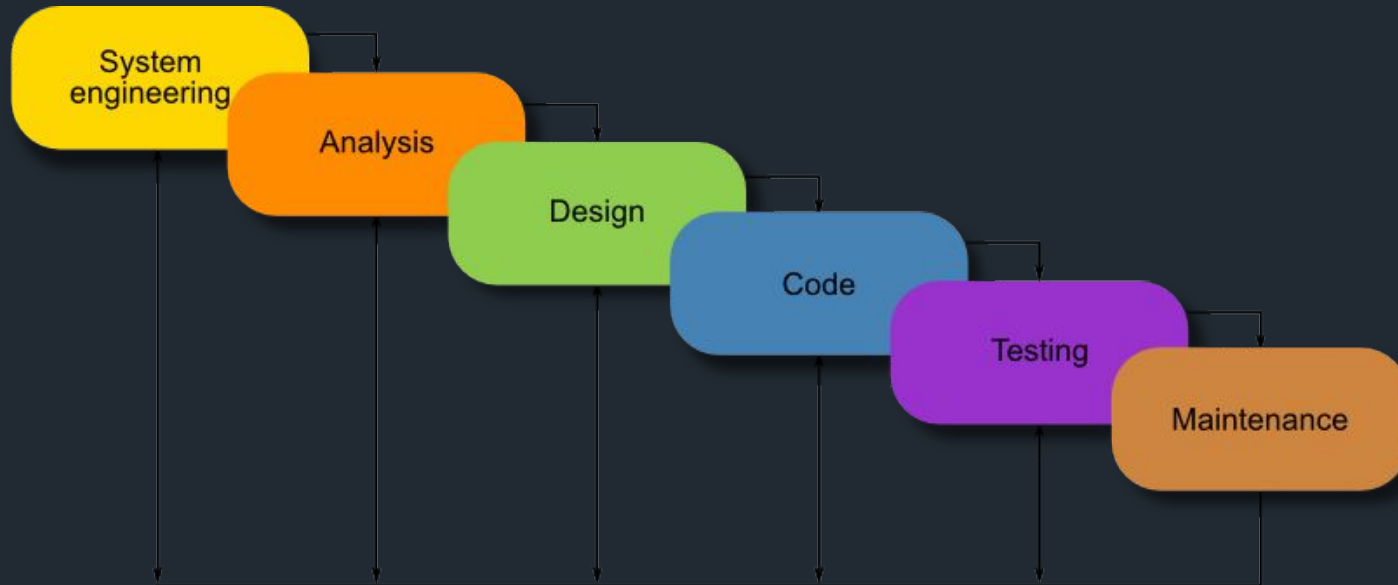


Design



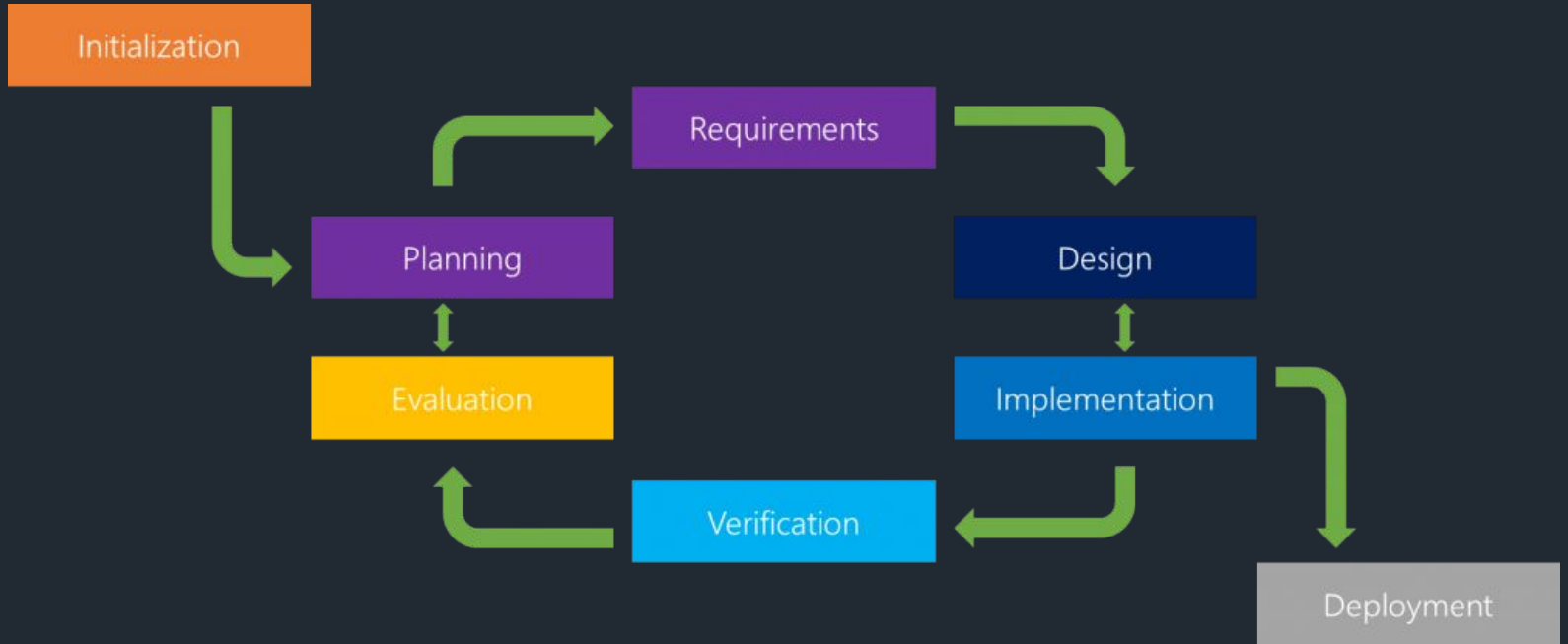
Deployment

# Common SDLC Models



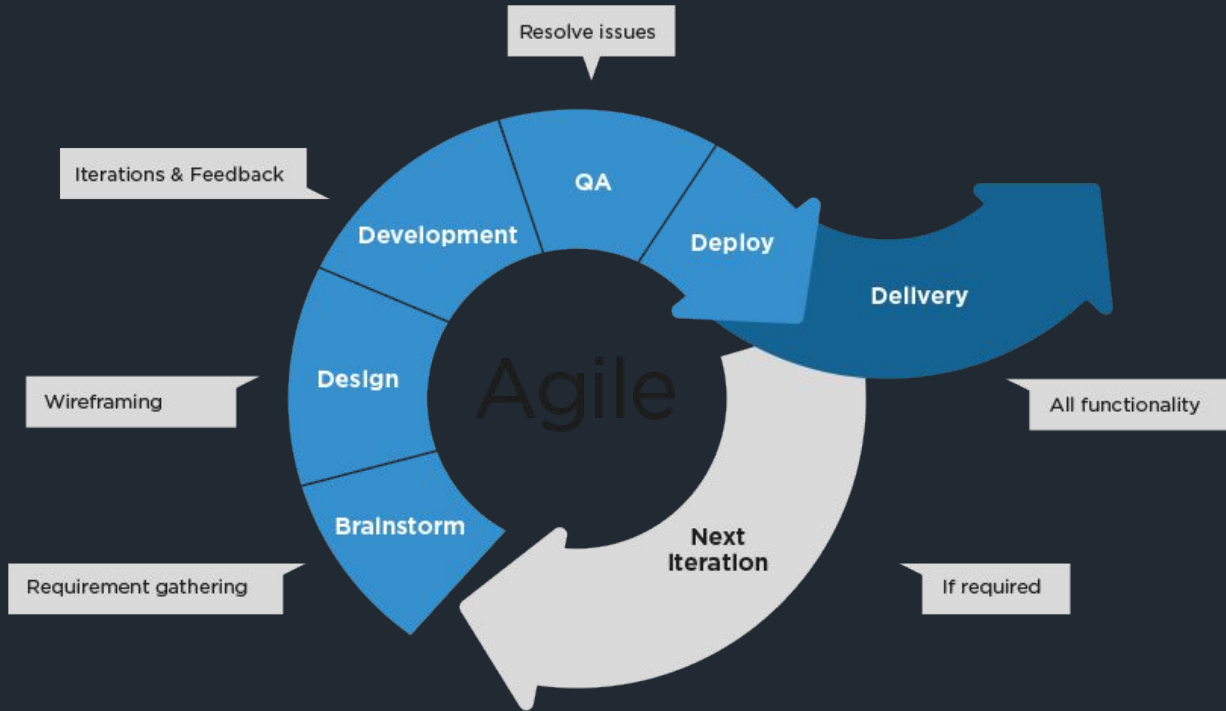
Waterfall Model

# Common SDLC Models



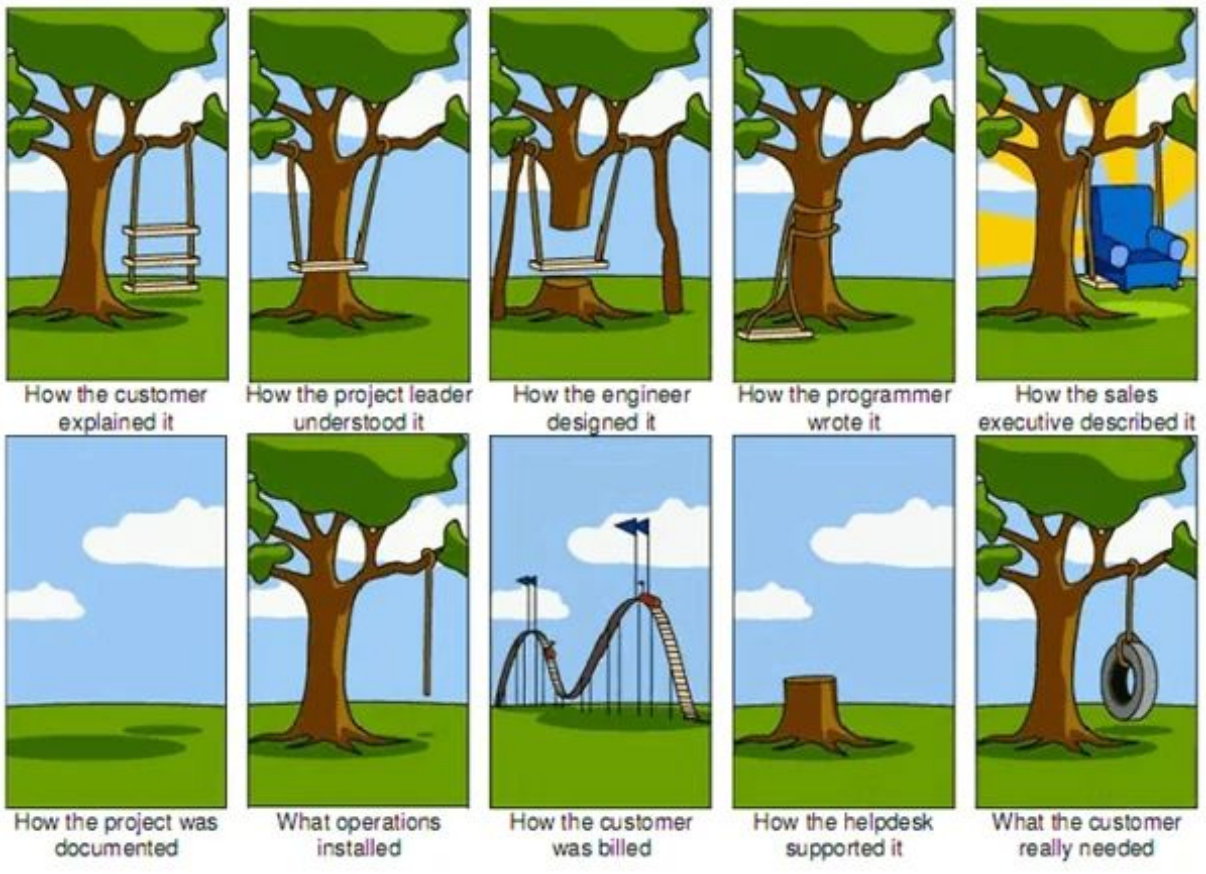
Iterative Model

# Common SDLC Models



Agile Model

# Key Objectives of Project Initiation





# Key Objectives of Project Initiation

- **Involves defining objectives and scope of the project.**
- **It's about answering questions like what the project aims to achieve and why**
- **Provides clarity to all stakeholders**



# Benefits of Project Planning



# Benefits of Project Planning



# Benefits of Project Planning



# Benefits of Project Planning

- **Creates a roadmap for the entire project.**
- **It defines timelines, allocates resources, and identifies potential risks**
- **Increases the chances of staying on track and within budget**



Best way to learn programming

# Build Something



## Finding a project that interests you

- **Stay focused**
- **Preserve and cement concepts you learned**



## Key Steps Developers use starting projects

1. **Project** definition
2. **Create** workflow
3. **Task** breakdown





## Define Project

- **What's the project**
- **Which features are needed/nice to have?**



# Example: ToDo List application

Should be accessible on web

Create tasks and remove them from the list

Dragging and dropping to reorder the list



Create a workflow

GitHub 

# Task Breakdown

ballerina-platform / Projects / Hacktoberfest 2023

Search: Type to search

## Hacktoberfest 2023

Issue List | Issue Board | + New View

Filter by keyword or by field

Discard Save

### No Status 8

- ballerina-library #4014  
Need to add proper error messages and handle native exceptions
- ballerina-update-tool #290  
Test update tool in environments tht Java is not installed
- ballerina-library #4859  
GraphQL Service Crashed When an Intersection Type Field Present in an Input Object
- ballerina-library #4848  
GraphQL Resolvers Cannot Return Error Reference Types
- ballerina-library #4826

### Todo 16

This item hasn't been started

- ballerina-library #4973  
[Task]: Implement a test suite for snowflake connector
- module-ballerina-c2c #734  
Change base image to musl if --libc=musl has given
- ballerina-lang #36098  
Using an undefined type in a service decl results in a misleading error message
- ballerina-update-tool #199  
bal -v -h command does not open the help window
- ballerina-lang #35018

### In Progress 10

This is actively being worked on

- ballerina-lang #36615  
Issues in errors logged for invalid completion types in stream type-descriptors
- ballerina-library #4764  
Connect to a websocket with http listener is not working
- ballerina-update-tool #309  
Unmatched argument log is printed in bal commands with --help flag
- ballerina-library #4765  
Failed to connect to a websocket connection which accept a parameter with an Enum type
- ballerina-library #3953

### PR Sent 1

- ballerina-lang #36113  
Add getAllDependents and getAllDependencies method to the DependencyGraph class

### Done 25

This has been completed

- ballerina-dev-website #6964  
Refactor the code in Release not
- ballerina-library #3083  
Remove Error logger in module-t
- ballerina-dev-website #6999  
Library spec pages are missing p the header
- ballerina-dev-website #8025  
Images are not rendered proper Pre-built example pages
- ballerina-library #4744  
int range overflow error when range in random:createIntInRan

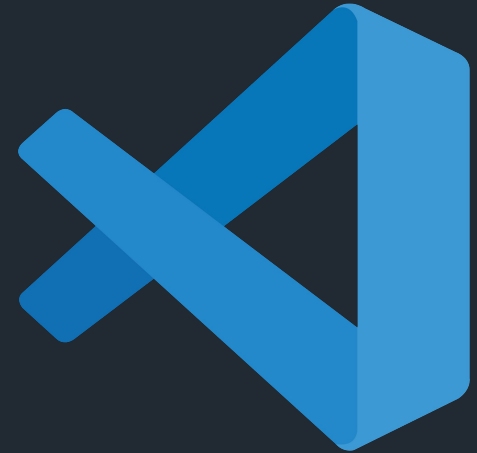
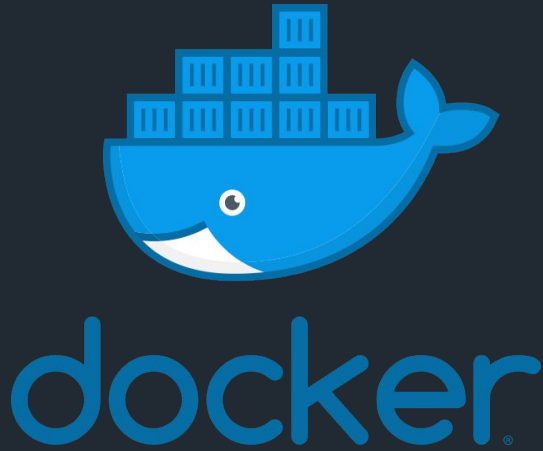
# Choosing the tech stack

## What is the right

- Language?
- Database?
- Structure?
- Hosting Platform?
- etc ....



# Configure components for the project



## Coding with Ballerina

# Ballerina

## SWAN LAKE



# Industry insights and best practices

- Use a version control system
- Write clean and well-documented code.
- Test your code regularly.
- Get feedback from others.
- Deploy your project early and often.





## Take home exercise



## Feedback On the session



# Join the Ballerina Community

