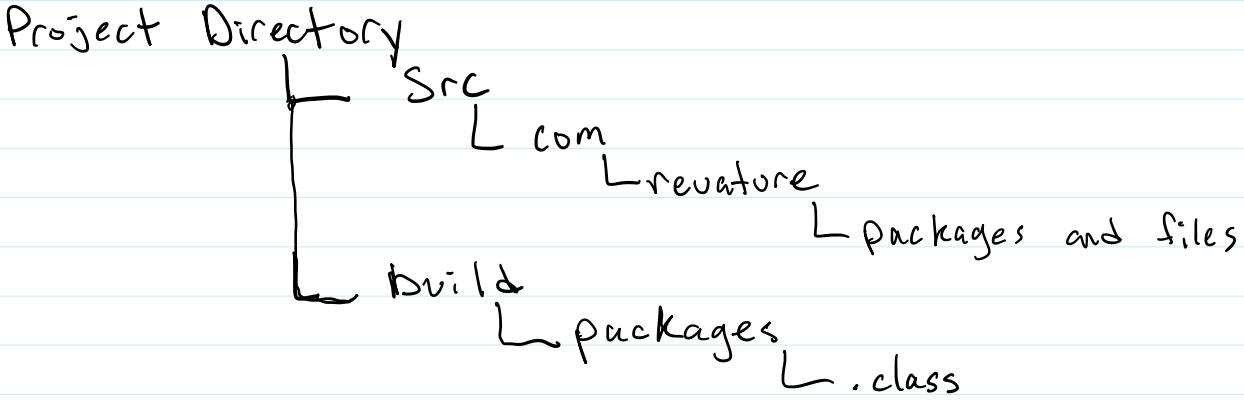
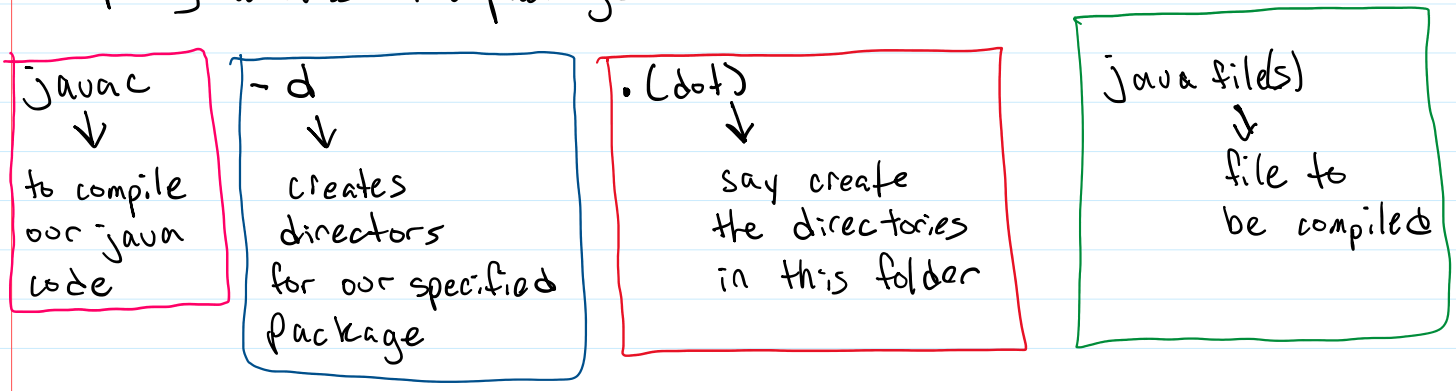
Day 5

Saturday, July 9, 2022 12:22 PM

Standard Java Project Structure



Compiling a class in a package



Software Development Life Cycle
SDLC

Process of
- planning
- creating
- testing
- deploying

The 7 general SDLC steps
1. Requirements
   - gathering info for what our app needs
2. Analysis
   - feasibility
3. Design

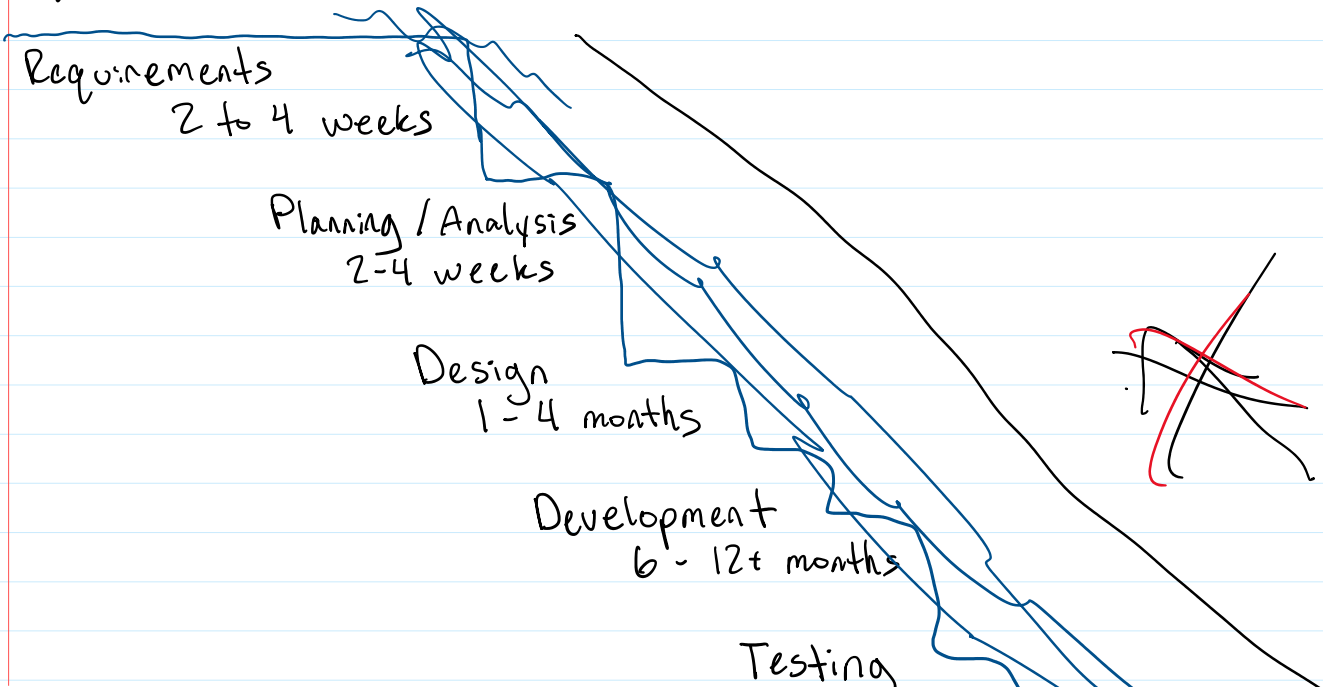
- feasibility

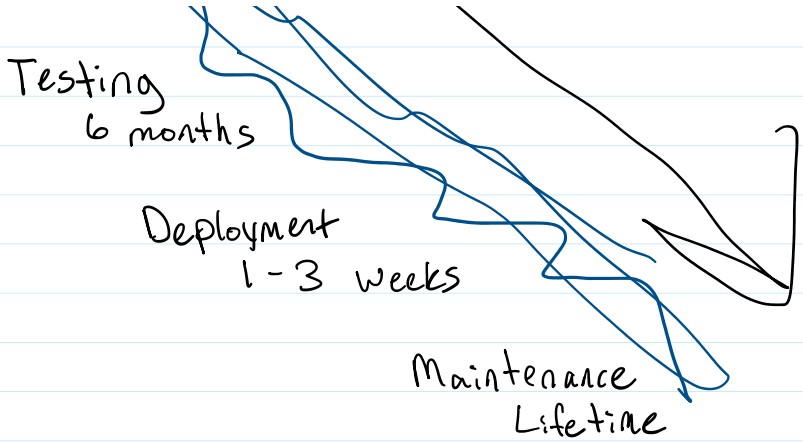
3. Design
   - figuring out how we will develop
   - whats going to take longer/shorter
4. Development
   - Writing Code
5. Testing
   - Making sure the code does what it is supposed to
6. Integration / Deployment
   - Make it so our end users have access
7. Maintenance
   - fixing bugs found later

Two main forms of SPLC
- Waterfall
- Agile

Waterfall
- Linear approach
- Complete one phase and move onto the next
- Once a phase is complete no going back

Typical Waterfall time line





Advantages to Waterfall
- Easy to manage workflow
- Best for small teams or small projects
- Generally it completes projects faster
- Process and results are easily documented
- Easily adaptable to new team members

Disadvantages
- Not very flexible
- Not as effecient
- Not as ideal for large projects
- Testing doesn't start until the end

Agile
- Iterative approach
- Go through the SDLC lifecycle in 2-4 week sprints

Agile is an ideology not concrete methodology

Core values
- Individuals and Interactions over processes and tools
- Working software over documentation
- Customer colaboration over contract negotiation
- Respond to change over following a plan

Advantages of Agile
- Client collaboration is generally coasidered good

Advantages of Agile
- Client collaboration is generally coasidered good
- Team culture tends to stay more self-organized and motivated
- Overall quality of the product is better
- Less risk in development

Disadvantages of Agile
- Not as useful for small projects
- Higher costs
- Development can bloat if continually push features down the road
- Require more experieaced team members

Agile / Scrum Concepts

Simplest agile framework, it enforces lead by a leader, that leader enforces those practices

Scrum Artifacts
- Product Owner
  - Representative of the client
- Scrum Master
  - Team leader who leads the ceremonies
- Project Backlog
  - List of feature (unfinished)
- Sprint Backlog
  - List of features for the 2-4 week sprint
- User Story
  - feature / requirement
- Epic
  - group of related user stories
- Sprint
  - the time period of development
- Velocity
  - the sum of story points completed that sprint

sprint

Story Pointing

Allows teams to assign / keep track of the difficulty of individual user stories

Burndown Charts
- Story points completed vs Story points day by day or sprint by sprint

As a team you decide what point value to give a user story based on:
- Risks
- Complexity
- Repetition

Couple ways to assign points
- Stat Poker
- Use fib
  - 1: trivial
  - 2: easy
  - 3: medium
  - 5: difficult...

Scrum Ceremonies
- meetings used the life cycle of the sprint

Sprint Planning:
- Everyone on the dev team, and product owner
- Happen once at the beginning
- Set goals, scope, and metrics

Daily Standup / Scrum
- Everyday lead by scrum master
- Only dev team
- Every says what they are working on what they want to accomplish and any blockers

what they want to accomplish
and any blockers
- ~15 minutes

Sprint Review
- Everyone is invited
- Review what the team accomplished
- Gain feedback
- Once at the end

Sprint Retrospective
- Scrum master will review metrics
- The goal is to improve next sprint
- Once at the end