CS 350 – Software Engineering

October 11, 2017

Week 8, Class #22

Frameworks

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MWF – 10:00-11:30 - Kepner 0095F

This Week – Technology

◇ **Monday, 10-9**

  ▪ Lecture – Learning

◇ **Wednesday, 10-11**

  ▪ Lecture – Frameworks

◇ **Friday, 10-13**

  ▪ Lecture – Dev Tools

Next Week

Design

Software frameworks

✧ Tools are built around frameworks

✧ Ecosystem based on common philosophy

✧ Must commit to one framework for effectiveness

✧ High learning cost - high productivity

Most Popular

- ✧ Ruby on Rails
- ✧ ASP
- ✧ JSP
- ✧ PHP
- ✧ Python/Django
- ✧ W3C

- ✧ C++
- ✧ Google App Engine
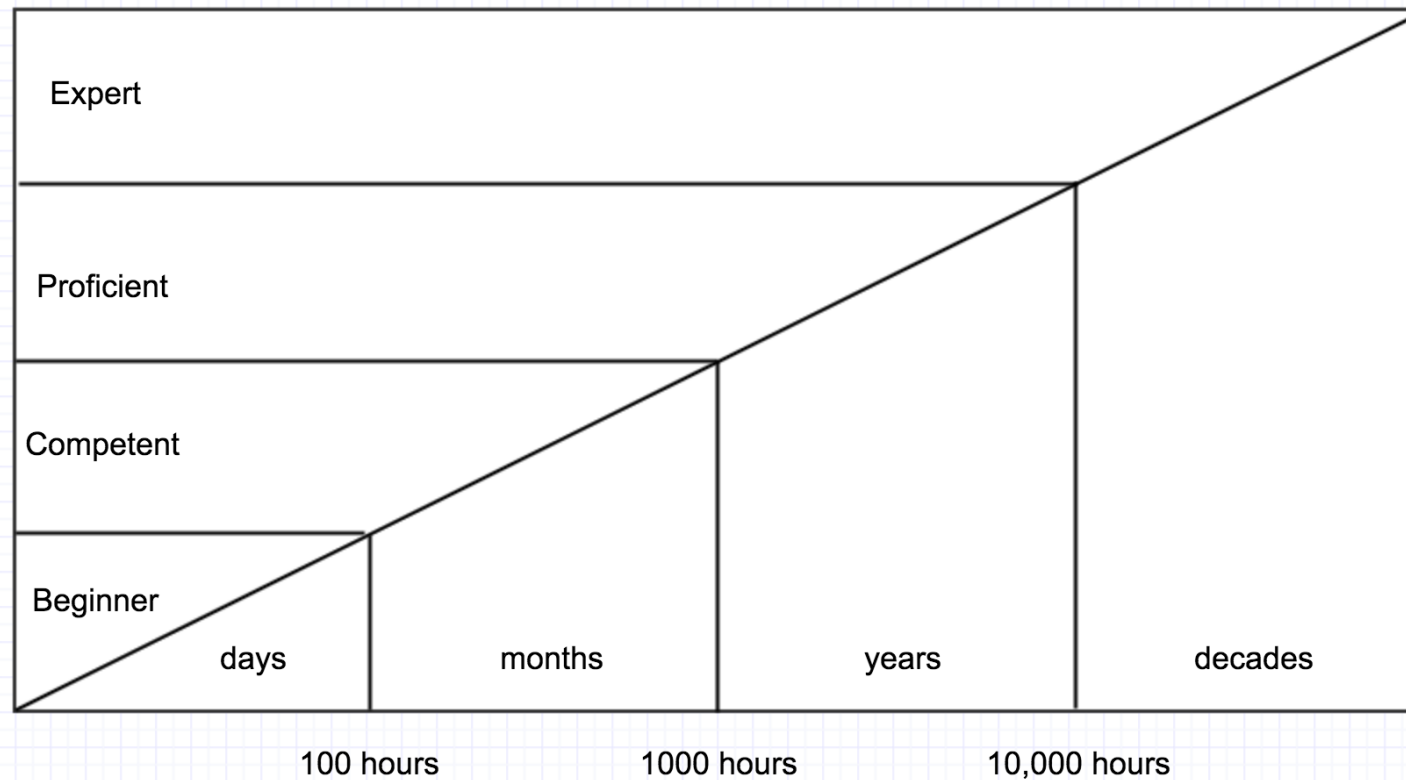- ✧ Node JS
- ✧ Angular JS

Full Stack

- ✧ Programming language

- ✧ OS

- ✧ Class libraries

- ✧ IDE

- ✧ Test tools

- ✧ Hosting Services

- ✧ Conferences & training materials

- ✧ Employee pool

- ✧ Future direction

Proficiency takes time

Effectiveness

Expert

Proficient

Competent

Beginner

| days | months | years | decades |

100 hours   1000 hours   10,000 hours

Switching Technologies is costly

✧ 2 years to hit peak effectiveness

✧ Invest a minimum of 3 years in one technology

Assignments and trust

- ■ Competent - trusted with a task
- ■ Proficient - trusted with a project

✧ Create a new competency every month & new proficiency every year

✧ Focus is the key to learning

Technology Planning Exercise

✧ Select the framework

✧ Assess your level of expertise

✧ Estimate the learning cost for new tools

✧ Create a schedule for required learning

✧ Plan one new competency

x

✧ X

✧ Y