

8TH LIGHT

The Modern Software Apprenticeship

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Software Craftsman

<http://www.8thlight.com>

Hiring a developer



Post Job



Wait for
Qualified
Candidate



Make Offer

Hiring a developer

Pos

Wait for Qualified Applicant

Offer

Hiring a developer



Hire a recruiter



Make Offer



Pay Recruiter
\$\$\$\$

CAREER JUNCTION

183/3,485 - 5.25%

'junior' level software
developer jobs

WHAT IS A YEAR?

Experience

THE MIDDLE 40%

Density of Talent

Software Apprenticeship

An experienced programmer (a craftsman) takes an inexperienced one (an apprentice) under his/her wing in order to teach the apprentice the skills necessary to become a craftsman.



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Software is our *craft*.™



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Principles of Apprenticeship

<http://www.8thlight.com>

PRODUCTIVITY IS NOT

**Learning is the Primary
Objective**

POSTURE OF LEARNING

**Choose Potential
Over Credential**

EACH ONE TEACH ONE

Mentoring is Personal

PROXIMAL ZONES OF LEARNING

**Mentors Need Not Be
Masters**

Proximal Learning



NOT “PUSH”

Learning is ‘Pull’

THE INFORMATION AGE

Knowledge is Nothing

CODING AS HANDWORK

Practice is Everything

ALWAYS AN APPRENTICE

Learning never stops

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How To Start an Apprenticeship Program

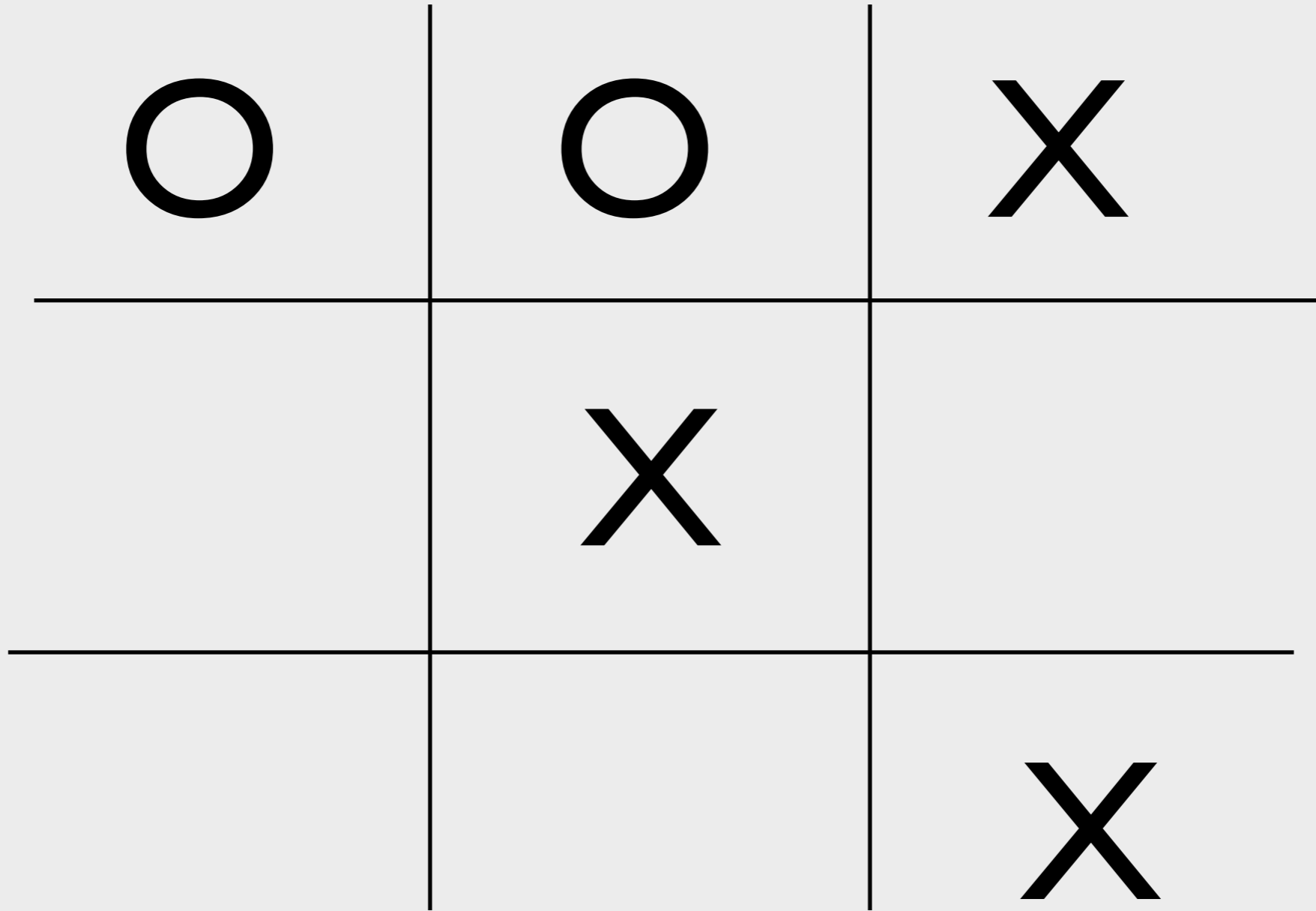
<http://www.8thlight.com>

WHO ME?

Identify Mentors

- without any assistance
- TDD
 - Unit Testing
 - Acceptance Testing
- Refactoring
 - Identifying smelly code
 - Improving the design
 - Staying green
- Design Principles
 - SOLID
 - Package Principles
- Object Oriented Design Patterns
 - Can identify patterns
 - Can apply patterns
 - Aware of costs and benefits of patterns
- Pair Programmer
 - Articulate a design or algorithm
 - Effective as a driver and navigator
- Agile Software Process
 - Works in iterations
 - Story cards
 - Demos new features
- Identify tasks too large for a timeframe
- Customer Collaboration
 - Creating stories based on a customer discussion
 - Creating Acceptance Tests with the customer
 - Providing transparency to customer
- Polyglot
 - Familiarity with a variety of language constructs
 - Can read code in unfamiliar languages
 - Can write code in multiple languages
- Communication Skills
 - Engaging live presentations
 - Clear writing
- Teaching
- Community Involvement
 - Blogs
 - User groups
 - IRC

Learning Objectives



Exercises

A Few books from the 8th Light Book list:

Software Craftsmanship - Pete McBreen

Pragmatic Programmer - Hunt / Thomas

Agile Software Development, Principles, Patterns, and Practices - Bob Martin

Clean Code - Bob Martin et al.

Refactoring - Martin Fowler

Design Patterns - Gang of Four

eXtreme programming explained - Kent Beck

Clean Coder - Bob Martin

Structure and Interpretation of Computer Programs – Abelson and Sussman

Reading List

WHERE DO I START?

Find Candidates

MAKE A PLAN

Build a Timeline

NOW AND LATER

Make an Offer

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Mentoring Practices

<http://www.8thlight.com>

MENTORING PRACTICES

**Communicate
Belonging**

MENTORING PRACTICES

Require Humility

MENTORING PRACTICES

Be Proactive

MENTORING PRACTICES

Feedback

MENTORING PRACTICES

Guide

MENTORING PRACTICES

Inspire

TIME TO MOVE ON

Transition

CONFUCIUS

因材施教 有教無類

Teach your student according to their aptitude,
and provide education for all without
discrimination.

THE SOFTWARE APPRENTICE

Why?

Resources

- Apprenticeship Patterns - David H. Hoover and Adewale Oshineye (O'Reily Media)
- <http://blog.8thlight.com/tags/apprenticeship.html>
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