Introduction

Instructor: Vatanak Vong

Resources

- **Reference Material Location**
  - https://github.com/v-vong3/csulb/tree/master/cecs_491

Who am I?

- **Background**
  - Graduated with a BS in Computer Science
  - Over 11+ years developing software for various industries
  - Specialize in delivering web solutions
- **Full-time**
  - Solutions Architect
    * Develop applications
    * Evaluate new technology
    * Establish processes and best practices
- **Part-time**
  - Freelance Developer
  - Computer Science Lecturer

Pop Quiz

Prompt:

Create a file called test.txt that contains the phrase “Hello World”.

Create a file called test2.txt that contains the phrase “Foobar”.

Copy the contents of test.txt to a new line at the end of test2.txt.

Answer:

echo “Hello World” > test.txt

echo “Foobar" > test2.txt

cat test.txt >> test2.txt

Python Version

```
test = open(“test.txt”, “a+”)
test.write(“Hello World”)
test.flush( )
test.seek(0)
fileText = test.next( )
test.close( )

test2 = open(“test2.txt”, “w”)
test2.write(“Foobar”)
test2.write(“\n”)
test2.write(fileText)
test2.close( )
```

Food for Thought

How would you describe software engineering?

“Software engineering is a world of tangents”
- Vatanak Vong

Course Objectives

- **Overview of modern technologies for delivering web solutions**
- **Reinforce understanding of SDLC**
- **Experience an Agile methodology**
- **Produce a tangible “real-world” system**

***Practical skills* for an impractical world**

Class for Career

- **The course is meant to provide you insight in a career as a software developer, as such, it is fast-paced.**
- **Time won't be spent on "syntax", since they can be easily web searched. Instead, the focus of lectures will be a *layman's* approach on core web concepts and practical applications**
- **Your effort will directly correlate with how much you can apply topics taught in class to a professional setting**
- **Homework is always to review all topics discussed in lecture & lab and material for the next class meeting in addition to assignments**

Demos?

- **Pre-built demos typically results in a “missing piece to the puzzle” feeling**
- **Given time and internet availability demos will try to be shown from scratch to show and present ALL steps in the process. It’s best to take notes during the demo then practice/ask questions during lab**

App of Substance

- Register
- Login / Logout
- Application content (Requirements)

- Logging
- Error Handling
- Security
- Data store access
- UI / UX
- Documentation

Review SDLC

- What are the phases of the SDLC?
- What techniques are used when designing software?
- What are the methodologies for development?

Project Criteria

- **Registration**
- **User Management**
- **Login / Logout**
- **User Access Control**
- **Usage Analysis Dashboard**
- **Logging / Archiving**
- **Error Handling**
- **Data store access**
- **Network communication**
- **Documentation**

- UI / UX
- Application content (Requirements)

Project Deliverables

- Project Plan
- Test Plan
- BRD
- Design Doc/FRD
- Site Map
- Tech Spec

Recommended Dev Environment

- Windows PC
- Local Admin
- Install
  1. Google Chrome
  2. .NET Framework **4.7.2** / .NET Standard **2.0**
  3. Visual Studio Community Edition
  4. SQL Server **2017** Developer Edition (Database Engine)
  5. SQL Server Management Studio (Database Client)
  6. Local IIS (Microsoft's Web Server)

Alternative Dev Environment

- MacOS / Linux (Debian-based distros)
- Install
  1. Google Chrome
  2. Docker Community Edition
  3. .NET Core **2.2** / .NET Standard **2.0**
  4. Visual Studio for Mac / Visual Studio Code
  5. SQL Server **2017** Container Image (Database Engine)
  6. Azure Data Studio (Database Client)
  7. NGINX (Lightweight web server)