Class 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 B.S. in Computer Science
  - Over 14+ years developing software for various industries
  - Specialize in delivering enterprise 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:

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

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

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

Pop Quiz

Prompt:

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Answer:

echo “Hello World” > test.txt

echo “Foobar" > test2.txt

cat test.txt >> test2.txt

Code Comparison

Shell Version

```
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?

Food for Thought

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“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**

Student Project Scope

- Features (Application Content)

Actual Project Scope

- Register
- Security (e.g. Login, Logout, UAC)
- Logging
- Error Handling
- Data Store
- UI / UX
- Documentation
- Features (Application Content)

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
- 6 unique features

Review SDLC

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

Project Deliverables

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

Technology Stack

- IDE
  - Visual Studio Code 1.59+
  - Visual Studio 2019 Community Edition
- Backend Framework
  - .NET 5+~6+ (Nov 2021)
- Languages
  - C# 9.0
  - ECMAScript 11+ / TypeScript 4+
- Data Store
  - Sql Server 2019 Developer/Express Edition (Database Engine)
  - SQL Server Management Studio (Database Client)
- Web Server
  - IIS 10+

Alternative Technologies

- IDE
  - Visual Studio for Mac 8.10+
- Data Store
  - MariaDB 10.6+ (MySQL fork)
- Web Server
  - Apache HTTP Server 2.4+
  - nginx 1.20+

Grade Breakdown