CSC468-01: Intro Cloud Computing
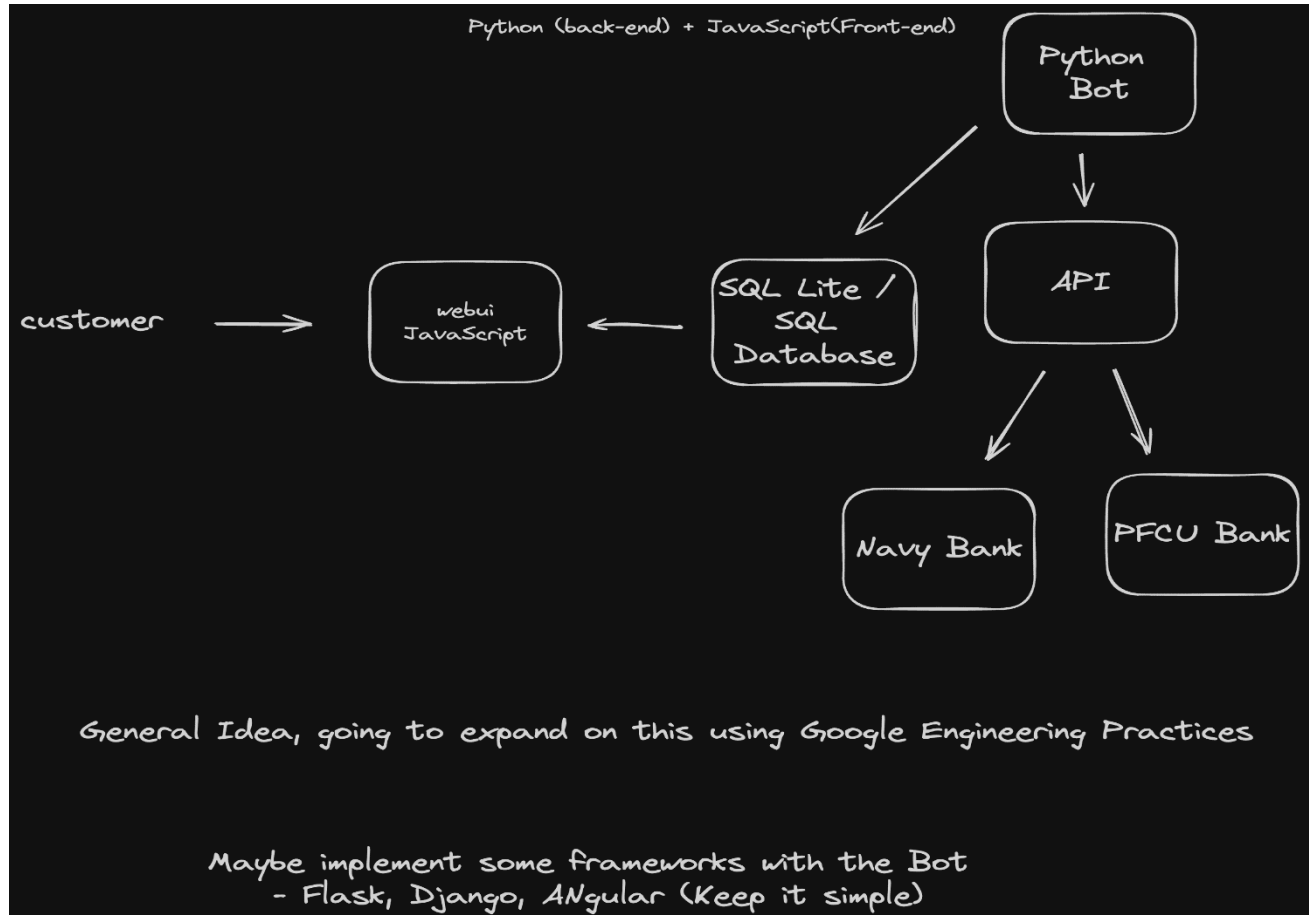
Group 7 Project Deliverable One

Spring 2024

By: Zahir Humphries, John Pluznyk, Kush Desai, Naseem Brady

Chapter 1: Team Vision

Python (back-end) + JavaScript(Front-end)

Python Bot

customer → webui JavaScript ← SQL Lite / SQL Database

API

Navy Bank

PFCU Bank

General Idea, going to expand on this using Google Engineering Practices

Maybe implement some frameworks with the Bot
- Flask, Django, ANgular (Keep it simple)

- User interacts with WebUI to get up to data information on their bank accounts
- Python Bot interacts with users bank accounts using the appropriate banking api to pull information from said bank account
- Once the information is pulled the Python Bot create an entry in the SQL database

Chapter 2: Team proposal

WE WILL CREATE A PYTHON BOT THAT WILL USE API CALLS TO EXTRACT ACCOUNT BALANCES FROM A BANK ACCOUNT & DISPLAY THE BALANCE ON THE SCREEN. POTENTIALLY STORING THE DATA IN DATABASE FOR REFERENCE IF FURTHER USE IS NEEDED. WE FIGURED TO MAKE SOMETHING THAT IS SIMPLE BUT ELLEGANT & IT CAN BE USED IN EVERYDAY LIFE.

IMPLEMENTATION:

OPEN STACK – OPEN STACK WILL BE RESPONSIBLE FOR BUILDING AND MAINTAINING THE INFRASTRUCTURE OF OUR SERVICE

WEBUI – LINUX CONTAINER

SQL DATABASE – LINUX CONTAINER

PYTHON BOT – LINUX CONTAINER

API – POTENTIAL BANK API'S

NEED TO FIGURE OUT API THAT WE CAN HAVE ACCESS TO. DO WE NEED TO BUILD OUR OWN BANKING SIMULATOR AND CREATE OUR OWN CUSTOM API?

PLUZNYK, JOHN

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OBJECTIVE

To inform reader of who I am for my CSC – 468 Cloud Computing class.

EDUCATION

West Chester University, West Chester, PA
Bachelor of Science, Computer Science (August 2020 – present; graduation May 2024)
- GPA: 3.6
- Member of the Computer Science Honor Society

WORK EXPERIENCE

West Chester University, West Chester, PA
Computer Science 2 Tutor (January 2022 – May 2022)

- Reinforced the fundamentals of coding and how to form simple programs.
- Communicated with students and assisted them in developing a learning plan.
- Helped students by listening to their struggles and generating solutions.

Mary Barness Tennis & Swim Club, Warrington, PA
Lifeguard, Swim Instructor (May 2016 – August 2020, seasonal)
- Monitored the wellbeing of guests and maintained a clean and safe pool.
- Taught patrons how to improve their swimming skills and how to be safe in water.

CERTIFICATES

Computer Security Certificate – From West Chester University

PROJECTS

MySQL JAVA GUI – This project is a simple GUI (Graphical User Interface) that allows the users to select the data table of their choosing from a database. I used Java's JFrame GUI interface to allow the user to select a table from a database. Upon selection of table, the entire table will be displayed. https://github.com/JohnPluznyk/JavaMySQL-GUI

Shell Interface C – For this project I created a simple shell interface for terminal users in Linux.   https://github.com/JohnPluznyk/LinuxShell

Java Compiler (Back End) – For this project I used JavaCC as a parser generator and lexical analyzer generator to create my own Java like language. I then created a semantic analyzer to check for syntactical errors and make sure programs adhere to the intended semantics

of my language. Lastly, after the Abstract Syntax Tree (AST) was created, I created target code generator that translated the AST in MIPS assembly.

CODING COURSEWORK

Design/Construction Compiler – Covers the basic topics in compiler design including lexical analysis, syntax analysis, error handling, symbol tables, intermediate code generation, and some optimization.

Data Base Management Systems – Studied characteristics of generalized database management systems and learned about the fundamentals of designing and implementing of a database system.

Software Engineering - Focused on more advanced topics in object-oriented programming, including project design, planning, and testing.

Data Structures and algorithms – Using object-oriented languages to explore data abstraction, recursion, lists, stacks, queues, linked lists, trees, hashing, and evaluating algorithm efficiency.

Operating Systems - Surveyed elements of an operating system with in-depth studies of certain features of specific operating systems (Linux). Focused on topics such as process scheduling and deadlock avoidance, memory management, and organization and protection of a file system.

Digital Image Processing – Focused on the fundamental concepts about the visualization of various data in the disciples of digital image processing, computer graphics, photometric processing, and image analysis.

Computer Systems – Exploring fundamental concepts of modern CPUs, memory, storage, networking, operating systems.

TECHNICAL SKILLS

Coding Languages: Java, C, MySQL, Python, HTML, CSS
Other: Linux, Docker, Kubernetes, data analytics
GitHub: https://github.com/JohnPluznyk
Linkedin: https://www.linkedin.com/in/john-pluznyk-4399b6225

kdd4203@gmail.com

Kush Desai

267-847-6047

Computer Science Major at West Chester University
https://www.linkedin.com/in/kdesai442/

Education:

West Chester University   West Chester,
Pennsylvania
Bachelor of Science in Computer Science   2021 - 2025

Experience:

Target   Target Dec 2019 &
Dec 2021 – Jan 2022

- Inventory management and customer service

IS&T Student Intern   West Chester University -
Aug 2022 – Present

- Resolving various technological issues
- Collaborating with other student interns
- Pick up and recycling various electronic equipment around campus

Certifications:

Responsive Web Design   FreeCodeCamp – July 2020
JavaScript Algorithms and Data Structures   FreeCodeCamp – July 2020
Front End Development Libraries   FreeCodeCamp – October
2021
Data Visualization   FreeCodeCamp – October
2021
JavaScript Coding Fundamentals   Google Grasshopper –
November 2021
JavaScript Coding Fundamentals II   Google Grasshopper –
December 2021
Scientific Computing with Python   FreeCodeCamp – Currently in
Progress

Technical Skills:

Java (Intermediate)   HTML (Beginner)   Python (Novice)
JavaScript (Beginner) C (Basics)

Involvement:

Computer Science Club   2021 -
2023

- Served as Vice President of the club for the Fall 2022 and Spring 2023 semesters

- Learned about and used various CS related topics outside of the university curriculum

Cyber Security Club   2021 - Present

- Introduced to various elements of cyber security
- Experimented with different applications such as WireShark
- Served as Treasurer of the club for the Fall 2023 and Spring 2024 semesters

NCAE Cyber Games
Feb 2022

- Collaborated as a team to set up, secure, protect, and maintain servers using Linux

Game Development Club   2022 - 2023

- Learned about software such as Unity for creating various types of games
- Created games and applications individually and as groups

Relevant Courses:

Computer Security and Ethics	Data Structures and Algorithms	Cloud Computing
Computer Systems	Foundations of Computer Science	Computer Language
Concepts/Paradigms		

Projects:

Unity Projects using C# Scripting

- Flappy Bird Clone
- Notepad Application

Interactive Discord Bot (Using Java and the Discord API) (In Progress)

- Typical Discord Bot with various messaging features and allowing user interaction

Python Projects (Using Python Library Imports)

- Snake Game
- YouTube Video Downloader (to MP4)
- Personal Password Manager with Encryption
- Slot Machine Casino Game

Naseem Brady

Comp. Sci. Major at West Chester University | Philadelphia, PA | (267) 581-3446 | nasbrady@gmail.com

OBJECTIVE

To complete this project.

EDUCATION

West Chester University, West Chester, PA
Bachelor of Science, Computer Science (August 2020 – present; graduation May 2024)
- GPA: 3.1

WORK EXPERIENCE

West Chester, Pa
1. The Giant Company – Produce Associate (Oct 2021 – June 2022)

PROJECTS

Text-Based Adventure-RPG "Unnamed": A project in development, made with Java, I started this project to showcase the skills, techniques, and concepts I've learned about programming after being in school for a couple years.

CODING COURSEWORK

Software Engineering - Focused on more advanced topics in object-oriented programming, including project design, planning, and testing.
Data Structures and algorithms – Using object-oriented languages to explore data abstraction, recursion, lists, stacks, queues, linked lists, trees, hashing, and evaluating algorithm efficiency.
Digital Image Processing – Focused on the fundamental concepts about the visualization of various data in the disciples of digital image processing, computer graphics, photometric processing, and image analysis.
Computer Systems – Exploring fundamental concepts of modern CPUs, memory, storage, networking, operating systems.

TECHNICAL SKILLS

Coding Languages: Java, Python, C++, HTML, CSS
Other: Linux, Mac, Windows
GitHub: https://github.com/Naseem-Brady

Zahir Humphries

Comp. Sci. Major at West Chester University | Philadelphia, PA | (215) 581-5099 |
zh921063@wcupa.edu

OBJECTIVE

To create a Python bot to pull bank information & display your current balance on the screen.

EDUCATION

West Chester University, West Chester, PA
Bachelor of Science, Computer Science (August 2020 – present; graduation May 2024)
- GPA: 3.3

WORK EXPERIENCE

West Chester, Pa
1. Google – Open-source with Norman Nanley

Flight Tracker, to track the most precious location of flight travel from a point A to point B

CODING COURSEWORK

Software Engineering - Focused on more advanced topics in object-oriented programming, including project design, planning, and testing.
Data Structures and algorithms – Using object-oriented languages to explore data abstraction, recursion, lists, stacks, queues, linked lists, trees, hashing, and evaluating algorithm efficiency.
Computer Science I, II, III – Java OOP programming

TECHNICAL SKILLS

Coding Languages: Java, Python, C++, HTML, CSS
Other: Linux, Mac, Windows
GitHub: https://github.com/ZHumphr