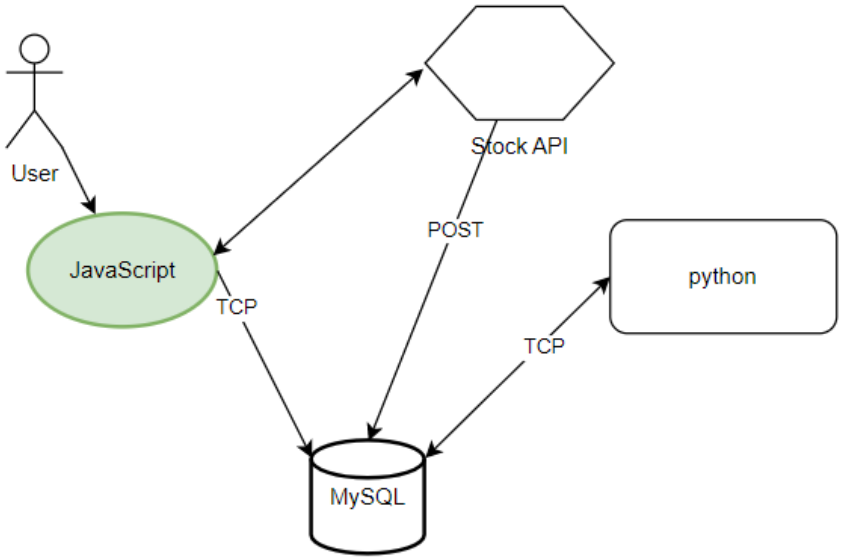
West Chester University

Brandon Kohler, Julia Kush, Jake, Stephen

Chapter 1:



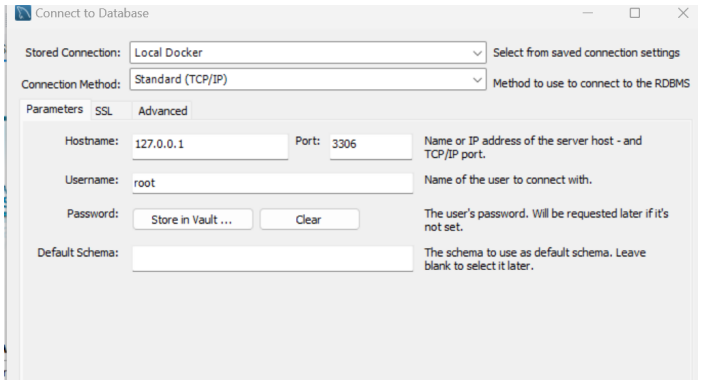
The idea behind Prospera was to give the public a way to use all of their finances. Gives the user a way to manage their own portfolio and also make transactions more personal, look up recent information on certain stocks, and have the ability to sell stock to be used as a wallet in any transaction the user might have.

Chapter 2:

We are going to use our WebUI coded in React.JS to display our customer account information with their currently owned stocks and the total value of these stocks. The user would have the opportunity to search for certain stocks and decide if they would like to buy or sell certain assets. Our Business model is that when a user is going to do a transaction they would be able to sell a fraction of the share to use like a debit card. All of that will be managed by our Python workers who will manage the changes to Database and have the changes shown in the UI. Our Frontend has a very simple design giving the user an easy time navigating. We will use a Web API to get the most recent prices and recent quarterly reports on certain Metrics that would be beneficial to the user when deciding if they want to buy/sell and stock. We will hold the user data in an SQL database holding their port ID, portfolio value, and portfolio items.

Chapter 3:

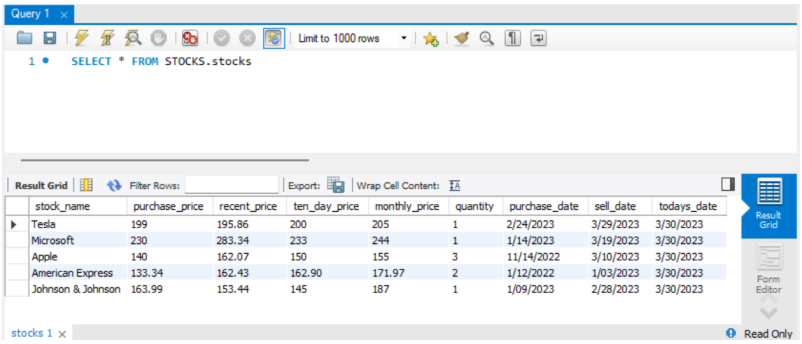
I created our mysql docker image by pulling an sql image. I used the command docker run –name some-mysql -e MYSQL_ROOT_PASSWORD = my-secret-pw -d mysql:tag. Some-mysql is the name I gave our container and created our password to be my-secret-pw. Next I ran docker run –name some-mysql -p 3306:3306 -e MYSQL_ROOT_PASSWORD = my-secret-pw -d mysql. This command adds the port of 3306 and removes the ":tag" from the command. This means the latest version is downloaded. This will allow us to use a program such as mysql workbench in which i did use to connect to the database. From there I opened up terminal and logged into my docker account, from there I pulled our docker image with the command: docker run –name some-mysql -p 3306:3306 -e MYSQL_ROOT_PASSWORD = my-secret-pw -d mysql. After that I tested to make sure the image was running by using the command docker ps. From there I connected to our database using mysql workbench.



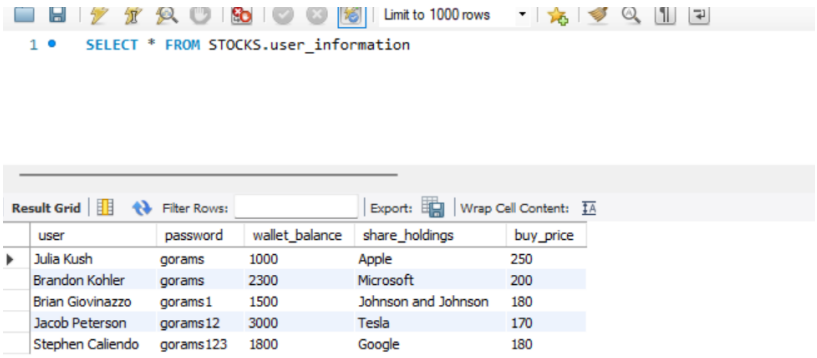
I used the local host IP Address and used port 3306 since that is what mysql port is and then root as the username and the password is my-secret-pw which I created with the image and container. Now I created our two table stocks and user_information.

Here are the two tables:

Stocks:



User_information:



To create these tables I used basic sql commands. I had to start off by creating the database. Create Database STOCKS; this will create the database and then I created our two tables by using the create table command. For the datatypes I just used varchar right now, varchar means character data that is varying. Also known as Variable Character, it is an indeterminate length string data type. It can hold numbers, letters and special characters. I used this for now to create our test data. For our stocks table I just researched online stock names and current prices everything else I just made up just as test data for now. For the user_information table I just used all of our names and test data once again. The user_information table will be used for our login page.

Chapter 4:

Chapter 4 provides a brief description about your attempts to connect the components together via Docker networks.

Our group created a dockerfile for sql with the following:

4 lines (4 sloc) | 86 Bytes

```
1  FROM mysql
2  ENV MYSQL_ROOT_PASSWORD my-secret-pw
3  VOLUME ["/var/lib/mysql"]
4  EXPOSE 3306
```

This takes our sql image from dockerhub and our volume for our tables. The docker port is 3306.

Our first run of the container was successful and we are able to access the tables in the docker container

Our python worker dockerfile looks like this:

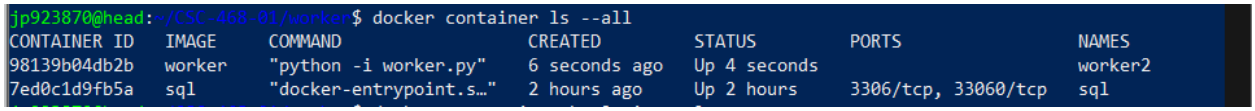
```
1  FROM python:3
2  WORKDIR /app
3  ADD requirements.txt .
4  ADD worker.py .
5  # install FreeTDS and dependencies
6  RUN apt-get update \
7   && apt-get install unixodbc -y \
8   && apt-get install unixodbc-dev -y \
9   && apt-get install freetds-dev -y \
10  && apt-get install freetds-bin -y \
11  && apt-get install tdsodbc -y \
12  && apt-get install --reinstall build-essential -y
13 # populate "ocbcinst.ini" as this is where ODBC driver config sits
14 RUN echo "[FreeTDS]\n\
15 Description = FreeTDS Driver\n\
16 Driver = /usr/lib/x86_64-linux-gnu/odbc/libtdsodbc.so\n\
17 Setup = /usr/lib/x86_64-linux-gnu/odbc/libtdsS.so" >> /etc/odbcinst.ini
18 #Pip command without proxy setting
19 RUN pip install -r requirements.txt
20 CMD ["python","-i","worker.py"]
```

This adds all of our dependencies for the api.py script, requirements.txt includes all of the external libraries that we need:

```
pyodbc
pandas
cufflinks
numpy
requests
```

The python code is stripped down for the moment because pyodbc requires a specific ip address to an sql server otherwise it will crash the container. Our original code would crash the container because pyodbc couldn't directly connect to the sql server.

I created the image for both the worker and mysql, and then created a container with both of those images:



I then interactively went into the worker container's shell and pinged the mysql container:

```
# ping sql
PING sql (172.18.0.2) 56(84) bytes of data.
64 bytes from sql.prosperanet (172.18.0.2): icmp_seq=1 ttl=64 time=0.184 ms
64 bytes from sql.prosperanet (172.18.0.2): icmp_seq=2 ttl=64 time=0.079 ms
64 bytes from sql.prosperanet (172.18.0.2): icmp_seq=3 ttl=64 time=0.084 ms
64 bytes from sql.prosperanet (172.18.0.2): icmp_seq=4 ttl=64 time=0.083 ms
64 bytes from sql.prosperanet (172.18.0.2): icmp_seq=5 ttl=64 time=0.086 ms
64 bytes from sql.prosperanet (172.18.0.2): icmp_seq=6 ttl=64 time=0.080 ms
64 bytes from sql.prosperanet (172.18.0.2): icmp_seq=7 ttl=64 time=0.079 ms
64 bytes from sql.prosperanet (172.18.0.2): icmp_seq=8 ttl=64 time=0.079 ms
64 bytes from sql.prosperanet (172.18.0.2): icmp_seq=9 ttl=64 time=0.130 ms
64 bytes from sql.prosperanet (172.18.0.2): icmp_seq=10 ttl=64 time=0.079 m
^C
--- sql ping statistics ---
10 packets transmitted, 10 received, 0% packet loss, time 9179ms
rtt min/avg/max/mdev = 0.079/0.096/0.184/0.032 ms
```

Resumes:

Julia Kush

Juliaekush@gmail.com

610.937.1614

EDUCATION

West Chester University
West Chester, PA

Major: BS - Computer Science *CUM GPA 3.75*
Minor: Applied Statistics
Computer Security Certification

Cardinal O'Hara High School
Springfield, PA
Graudated May 2019

SUMMARY

A talented senior majoring in computer science with a focus in cyber security and statistics. I have significant experience with multiple programming languages and advanced mathematical and analytical skills. I am seeking an internship to put my skills to use enhancing network security this summer.

WORK EXPERIENCE

Universal Health Services
King of Prussia, PA
Software Engineer - Intern *June 2022 - Present*

- Generate team project report and open incident report
- Collaborate closely with senior level developers to assist with integrated testing and documentation
- Assist with analysis on larger issues which are used by senior level developers
- Utilize SQL Server Studio to house data for projects
- Create database objects such as tables, stored procedures, and views in SQL Server Studio
- Implement SSIS packages to migrate data from data warehouse to our local data models
- Design end user reports using Power BI and SSRS Reporting tools

Telco Holdings Inc.
West Chester, PA
Computer Implementation Specialist - Intern *May 2021 – January 2022*

- Imaged windows-based computers and Laptops
- Installed applications, VPN, and management software
- Configured user domain access
- Performed testing and configuration validation
- Boxed configured devices and worked in partnership with field deployment services
- Individually contributed and collaborated with managed services desk stakeholders

Joseph Anthony Retreat Spa
Springfield, PA *Spa Attendant*
June 2018 – July 2019

- Communicated daily with all suppliers, ensuring proper quantities of products were fresh and delivered timely
- Supported masseuses and management
- Maintained and sanitized SPA
- Replenished stock
- Tear down and set up treatment rooms after each service
- Customer-focused services

SKILLS & CERTIFICATIONS

- **Soft Skills**
  - Goal oriented, strong networking capabilities, communication and listening skills, team oriented, flexible, time-mangement, creative thinking, organization
- **Techinical IT Skills**

  - Languages: Java, C++, MySql, R, Haskell

  - Proficient with Microsoft Suite, R-Studio, Visual Studio, GitHub, J-Grasp, Eclispe, Power BI, SSRS, SSIS, SQL Server Studio

- **Honor Roll Spring 2020, Fall 2020, Spring 2021, Fall 2021.**

Brandon Kohler

267-975-1813 | BrandonKohler2000@gmail.com | linkedin.com/in/brandon-kohler-1788391b7/ | github.com/Kohler123

Education

West Chester University West Chester, PA Bachelor of Science in Computer Science Sept 2019 – Aug 2023

CSC496 iOS Development: Language basics, SwiftUI, SpriteKit, MVC Pattern

CSC468 Cloud Development: Cloud Computing, Virtualization, Containerization, and Orchestration

CSC402 Software Engineering: Object Orientated Design Principles, Refactoring, and Design Patterns

CSC321 Database Management: Table Design and Normalization, UML Design, Web-based Database System

CSC231 Computer Systems: Memory hierarchy, Optimizing program performance, Operating Systems and Network functions

STA 200 Statistics II: Normal Distribution, Hypothesis Testing, and Linear Regression Analysis of Variance,Multiple Regression, Categorical Data and Chi-square Analysis and Nonparametric

Experience

Information Technology Sector Head – West Chester Investment Group West Chester, Pa

Manages a group of analysts, with weekly meetings and teaching of appropriate topics over a span of a semester.

Utilizing Financial Accounting concepts, Monte Carlo, VAR, Risk Analysis, Stochastic processes, Approximations and Sentiment Analysis

Using Bloomberg Terminal to create risk models, financial forecasting, and fundamental and technical valuation, to optimize portfolio allocation and performance

West Chester University Competitive Programming Contest West Chester Pa

West Chester University Competitive Programming Club

Students were presented with a number of problems with a limited amount of time.

Encouraged students to strengthen coding skills

Office Assistant

Moreland Development LLC Philadelphia, PA

Determined the length of time to maintain various documents such as tax returns, human resource records, leases, sale documents, and construction documents.

Implemented this plan based on relevant documents by sorting through documents and reorganizing the files by project and year.

Projects

iOS Game | Swift, SwiftUI **Dec 2022**

Created a Game using Swift that utilizes Swift's contact detection, SpriteKit's, and Swift's Game Physics

Used API for Game images that were used in UI

Financial Scraping | Python **March 2022**

Created a project for West Chester Investment Group that utilized APIs and Pandas data frame functions to get the most recent prices as well as ratios to perform fundamental analysis • Used Pandas and Numpy for tasks

Website Portfolio Project | JS, CSS, HTML June 2022 - July 2022

Created a website over the summer using CSS/HTML/JavaScript to demonstrate development skills

Learned basic JS and utilized Grid and Column Structure using HTML/CSS

Technical Skills

Languages: Java, Python, C, JavaScript, HTML/CSS, SQL, VBA,
Frameworks: React, Node.js
Developer Tools: Bloomberg Terminal, Excel, SPSS, MatLab Git, Docker, Kubernetes, Jenkins, Visual Studio, PyCharm, Eclipse
Libraries: Pandas, NumPy, Matplotlib
Certificates:[Linkedin: Business Statistics using Excel, Statistics and Probability], [Code Academy: Python 3, SQL, Data Structures, Sorting Algorithms, Linear Structures]

Brian Giovinazzo

(209) 597-7875 | brian.giovinazzo@gmail.com

http://www.linkedin.com/in/brian-giovinazzo ·
https://github.com/Brian-Giovinazzo/School-Projects

Objective

To obtain a software engineering internship at a company that will utilize my technical skills and knowledge to effectuate impactful improvements in our world while fostering self-development.

Skills & Abilities

- Software: Java, JavaScript, Python, C, NodeJS, Express, MongoDB, CSS, HTML, XML
- Software Tools: VS Code, Eclipse, GitHub, PyCharm, Docker, Cisco Packet Tracer, SolidWorks, MATLAB, Anaconda, MongoDBCompass
- Mechanical: knockout, drill press, grinder, impact driver, blowtorch, and various hand tools
- Electrical: multimeter, crimping tool, soldering, insulation tester, DLRO, and phase rotation meter
- Personal: fast-learner, works well in a team or individual setting, detail-oriented, initiative taker, life-long learner, and prompt
- Certifications: Substation Maintenance, Circuit Breaker/Medium-Voltage, Basic Electrical Troubleshooting, Battery Maintenance and Testing, Infrared Thermography I, Electrical Safety for Industrial Facilities

Education

B.S. Computer Science | West Chester University | Estimated Graduation Date: Dec 2023 | GPA: 3.87

· Awards: Dean's List (2022), placed 3rd in the WCU CS Programming Competition in Java (Spring 2022, Spring 2023), and participated in the ICPC 2023

- Memberships: WCU Computer Science Club, Competitive Programming Club

N/A | United States Naval Academy | Sep 2007 – Sep 2010

- Mechanical Engineering and Economics majors. Commandant's List Spring of 2009. Sea Trials Leader for 2008 and 2009.

Experience

Software Intern | QSI Technologies Inc. | May 2022 - Dec 2022

- Implement front-end code in CSS, XML, and HTML to expand company capability from desktop-only website to the mobile platform
- Optimize web pages using responsive design for mobile use while prioritizing customers' requests of desired site features
- Developed enhancements that will be implemented in the next software update to service all internal and external QSI customers
- Meet with software team to present and obtain feedback on the mobile design

Hydro Maintenance Electrician | California Department of Water Resources | Nov 2014 - Nov 2021

- Supervised an Electrician Apprentice in day-to-day operations
- Led in planning and executing facility lighting project from start to finish
- Performed maintenance and repair of all electrical equipment and apparatus of a large hydroelectric installation, from 24 V to 230,000 V

Assistant Operator | Pactiv | Aug 2013 – Nov 2014

- Ensured proper operation of all machines in the production facility

Machinist's Mate and Midshipman | United States Navy | Aug 2006 – Nov 2010

- Trained to be a Mechanical Operator for submarines
- Held Secret level clearance

JACOB PETERSON

Address: 94 Hornbean Ave, Swedesboro, New Jersey 08085 **Phone:** 484.326.4896 **Email:** jakepeterson2001@gmail.com

- PROGRAMMER –

EDUCATION

West Chester University of Pennsylvania, West Chester PA
B.S. Computer Science
Anticipated May 2023
GPA 3.6

WORK EXPERIENCE

Amazon, Logan Township, New Jersey

WAREHOUSE ASSOCIATE **2020-Present**

- Ensuring all customer parcels are carefully packaged and shipped efficiently
- Organizing specific packages by businesses and destination
  - Collaborative with team members and management
- Perfect attendance and punctuality for 2 years

Kohl's, Media, Pennsylvania

FLOOR ASSOCIATE / CUSTOMER SERVICE 2018-2020

- Helping customers find items
- Recommending certain products based on professional experience
  - Using knowledge of the POS system to help customers purchase, return or exchange items in a quick mannerly fashion
  - Educate customers on the return policies of the company and help them choose the outcome that most benefits their experience
  - Cross trained in Customer service, Back stocking, Inventory, Homegoods, and Shoes.

ACHIEVEMENTS AND CERTIFICATIONS

- Computer Security Certificate
- Advisor to Computer Science department hiring process
- Deans list 2 semesters

SKILLS AND CODING LANGUAGES

- Proficient in Java
- Proficient in C
- Proficient in Python
- Proficient in Linux terminal environment
- Familiar with Microsoft Office Suite
- Familiar with HTML