Jacob Roedel
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EDUCATION

THE GEORGE WASHINGTON UNIVERSITY 　　　　　　　　　　　　　　Washington, D.C.
Bachelor of Science in Computer Science; Minor in Economics 　　　　　　　　May 2024
University Honors Program; Presidential Academic Scholarship
Relevant Coursework: Software Engineering, Database Systems, Systems Programming, Data Structures and Algorithms

TECHNICAL PROJECTS

ONLINE STORE SIMULATION 　　　　　　　　　　　　　　　　　　　　March 2022
- Developed full-stack software to mimic an online store by developing a SQL schema and database scripts to maintain user and product information
- Designed UI/UX through a series of render-templates, redirects, and CSS styling which facilitated user navigation of the store and allowed the user to sign-in/sign-up/logout, add to and edit the cart, and checkout through session variables
- Applied Cursor objects to connect Python files with my database and execute SQL queries to update the database upon new information

MINI SEARCH ENGINE 　　　　　　　　　　　　　　　　　　　　　　December 2021
- Created unique HashMap and Linked Lists structures in C to resemble a HashMap of Linked Lists, in which each node in the first layer of Linked Lists is the head of another Linked List
- Utilized these structures to represent word/document pairs by using the first layer of linked lists to represent each word and how many documents they appear in, and the second layer of linked lists to represent each document the word appears in as well as its frequency in said document
- Implemented a term frequency-inverse document frequency ranking system to determine the relevancy of a given set of documents for a specific search query inputted by a user

ENCRYPTION 　　　　　　　　　　　　　　　　　　　　　　　　　　November 2021
- Executed Vigenère and Caesar ciphers in LC-3 Assembly to simulate an encryption/decryption model
- Received a five-character key and a ten-character message, and outputted the encrypted/decrypted message
- Implemented error checking to analyze the validity of the inputs, including the key and operation
- Employed subroutines to implement multiplication, XOR, and modulo algorithms to assist with the ciphers

WORK EXPERIENCE

GBNY 　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Hicksville, NY
Website Editor 　　　　　　　　　　　　　　　　　　　　　　　　June 2021 – August 2021
- Increased total website viewership by 12% by editing front-end aspects and improving overall UX
- Managed and edited the designs and layout of various GBNY websites using Shopify
- Improved product descriptions and website organization, and updated product availability throughout several sites

Martial Arts Training Center 　　　　　　　　　　　　　　　　　　　　Deer Park, NY
Assistant Instructor 　　　　　　　　　　　　　　　　　　　　　June 2015 – August 2018
- Assisted with the instruction of youth classes and increased class attendance by 17% during classes I instructed
- Reviewed and discussed progress with students and their parents to promote student achievement and growth
- Created new drills and activities that were used during class to diversify training routines

ADDITIONAL INFORMATION

Languages: C, Python, Java, HTML, CSS, MySQL, sqlite3, LC-3 Assembly
Leadership: Speech and Debate Captain, NY, September 2019 – June 2020
Clubs: GW Association for Computing Machinery