Final Year Projects Summary

Customer Management System (CRUD): As a full-stack developer, I built a customer management system featuring full CRUD functionality using Angular 6 for frontend and ASP.NET Web API for backend. The system allowed users to create, update, delete, and search customer records stored in a SQL Server database. The frontend was developed in VS Code, while the backend was implemented in Microsoft Visual Studio 2022.

Bulk-Email Sender for Learnership App: I developed a Python-based bulk email sender to automate applications for 300+ recipients. This program leveraged SMTP protocol to efficiently send emails, with built-in error handling and logging mechanisms to ensure seamless and reliable delivery.

PROJECTS

ROLE:
Developer

Technologies:
→ Angular
→ Visual Studio Code
→ Microsoft Visual Studio 2022

Customer Management System (CRUD)

- Built a customer management system using Angular 6 for frontend and ASP.NET Web API for backend.
- Developed full CRUD functionality to create, update, delete, and search customers in a SQL Server database.
- Implemented a responsive UI in VS Code, and integrated the API running in Microsoft Visual Studio 2022.

Link To Project:
- Customer-Management-Full-Angular

ROLE:
Developer

Technologies:
→ Visual Studio Code

Bulk-Email Sender for Learnership App

- Developed a Python-based bulk email sender to automate applications for 300+ recipients.
- Utilized SMTP protocol for efficient email delivery and implemented error handling for failed emails.
- Optimized email processing for better performance and reliability in mass email dispatch.

Link To Project:
- SMTP_Email_Sender

Final Year Projects Summary

During my final year, I successfully completed several significant projects that showcased my programming skills and leadership abilities across various technologies and methodologies.

Quiz Game Development: As the group leader, I spearheaded a team of five students in creating an interactive quiz game using C++ and Microsoft Visual Studio. This project not only enhanced my technical skills but also honed my leadership and project management capabilities, as I coordinated the team's efforts and ensured timely completion of our objectives.

Clinic Management System: In the IT module, I took on the role of programming team leader for the development of a frontend system for a clinic management system tailored for the UKZN Howard College Clinic. This project involved collaboration with my peers to complete milestones 1 and 2, where we focused on user interface design and database integration using C# and Microsoft SQL.

Web Application for Clinic Management: Building on the previous project, I contributed to the development of a comprehensive web application for the UKZN Howard Campus Clinic Management System. Utilizing C#, ASP.NET, CSS, and JavaScript, I played a key role in this project during milestone 4, applying Agile methodologies to ensure efficient development and deployment.

Artificial Intelligence Algorithms: In my Artificial Intelligence module, I implemented various algorithms, including search algorithms, genetic algorithms, and neural networks, using Python. This project deepened my understanding of AI concepts and their practical applications, allowing me to explore advanced computational techniques.

Object-Oriented Programming Projects: Throughout the year, I regularly engaged in object-oriented programming projects in Java, my preferred programming language. One of my recent projects was the development of a file management system, which demonstrated my proficiency in OOP principles and my ability to create functional software solutions with DSAs.

PROJECTS

ROLE: Group Leader

Technologies:
→C++
→Microsoft Visual Studio 2022

Learning Quiz Game Development

- Led a team of 5 students to develop a quiz game as part of the final year project for the Advanced Programming module. Responsible for project management and coordinating team efforts.

Link To Project:
- COMP315_Quiz_Game_Project

ROLE: Programming Team Leader

Technologies:
→C#
→Microsoft SQL
→Crystal Reports
→Microsoft Visual Studio 2022

Front-end Clinic Management System

- Led the programming team in developing a frontend system for a clinic management system for the UKZN Howard College Clinic as part of the IT module. Successfully completed milestones 1 and 2.

Link To Project:
- UKZN_Howard_Clinic_Management_Sys_Designs

ROLE: Programming Team Leader

Technologies:
→C#
→JavaScript
→Microsoft SQL
→Crystal Reports
→ASP.NET
→CSS
→Microsoft Visual Studio 2022

Web Application for Clinic Management System

- Developed a comprehensive web application for the UKZN Howard Campus Clinic Management System during milestone 4, utilizing the Agile System Development Life Cycle.

Link To Project:
- Web Application for Clinic Management System

ROLE: Developer

Technologies:
→Python
→Visual Studio (VS Code)

Artificial Intelligence Algorithms

- Implemented various artificial intelligence algorithms, including search algorithms, genetic algorithms, and neural networks, as part of the final year module on Artificial Intelligence.

Link To Project:
- Artificial Intelligence Algorithms

ROLE: Developer

Technologies:
→JAVA
→Eclipse IDE

Object-Oriented Programming Projects

- Regularly write object-oriented programming projects in Java. Recently developed a file management system, showcasing proficiency in OOP principles and Data Structure and Algorithm Implementation.

Link To Project:
- Java Projects

SBONGAKONKE SFISO MABASO

COMPUTER SCIENCE AND IT GRADUATE

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076 017 8522

sfisomabaso12242001@gmail.com

Personal Portfolio

LinkedIn Profile

ABOUT ME

I am an entrepreneurial Computer Science and IT graduate from the University of KwaZulu-Natal, recognized as a Golden Key Society member for ranking in the top 15% of students. During the COVID-19 pandemic, I launched a small business building wooden dog kennels.

Originally from Bergville, KwaZulu-Natal, I ranked among the top students in my matric year, earning the only A in Life Sciences. I specialize in object-oriented programming (Java, C#, C++, Python) and web development using the Microsoft stack (ASP.NET, SQL Server, JavaScript, CSS), with a strong focus on creating intuitive and responsive applications.

Languages

English

REFERENCES

SPHESIHLE MABASO
Farmlee Save
Cell No.: 072 197 1554

MR N.L NHLAPHO
Tholithemba High School
Cell No.: 063 377 7872

PERSONAL DETAILS

Date of birth
24 December 2001

Nationality
South African

Marital status
Single

WORK EXPERIENCE

FARMLEE SAVE
Bergville
Dec 2020 – Feb 2021

General Worker

- Efficiently managed packaging operations, ensuring timely and accurate fulfilment of orders.
- Performed thorough cleaning of crates, maintaining high hygiene standards.
- Proactively emptied and sanitized dirty bins, contributing to a safe and organized work environment.

UNIVERSITY OF KWAZULU-NATAL
Durban
Feb 2024 – Nov 2024

Demonstrator

- Delivered engaging tutoring sessions on Object-Oriented Programming and Graphical User Interface for second-year students in COMP 200.
- Facilitated foundational learning in Java and Object-Oriented Programming for first-year students in COMP 102.

EDUCATION

THOLITHEMBA HIGH SCHOOL
Bergville
Jan 2015 – Nov 2019

Grade 12

- English First Additional Language
- IsiZulu Home Language
- Mathematics
- Life Orientation
- Geography
- Life Sciences
- Physical Sciences

UNIVERSITY OF KWAZULU-NATAL
Durban
Jan 2022 – Nov 2024

BSc Computer Science and Information Technology

- Bachelor's degree in Computer Science and Information Technology Graduation Date May 2025.

SKILLS

JAVA, ASP.NET Web API, Crystal Report

ASP.NET, JavaScript, HTML, CSS

Python, Microsoft Office 365

C++, Angular, OS Installation

C#, Node JS, Linux, Windows

Microsoft SQL, MySQL, Power BI