**Smanga Zikalala - Tech Portfolio**

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**About Me**

I am a final-year Computer Science student at Tshwane University of Technology, specializing in software and mobile development. With a strong foundation in Java, Kotlin, SQL, HTML, CSS, and Linux, I am passionate about building innovative web applications that address real-world problems.

**Projects**

**NB:** Most of the following projects are not hosted due to some reasons (indicated on each project).

**Pulse App - Mood Detection Web Application**

**Description:** The Pulse App is a web application that uses sensors to detect a user's pulse and determine their mood based on the collected data. It provides insights into the user's emotional state, aiding in better understanding and management of emotions.

**Key Features:**

* Real-time pulse detection via connected sensors
* Mood analysis based on biometric data
* User-friendly web interface displaying mood results

**Technologies Used:**

* Java, Kotlin
* HTML, CSS, JavaScript
* Spring Boot
* MongoDB, MariaDB
* Bootstrap

**Link**: (This is the link to be account that uploaded the project, It was a group project) [igris-marvin/pulse\_app\_repo (github.com)](https://github.com/igris-marvin/pulse_app_repo)

**Hosting Information:**

This project is not hosted because it requires a sensor device for the pulse to be able to run.

**Demo Video:**

To view the video of this website, click here ) [igris-marvin/sani (github.com)](https://github.com/igris-marvin/sani)

**Mobile Toilet Booking Web Application**

**Description:** The Mobile Toilet Booking App is a web-based platform that allows users to locate and book nearby toilets. This application aims to improve public sanitation by providing a convenient solution for finding and reserving restrooms.

**Key Features:**

* Real-time location tracking of available facilities
* Booking and reservation system
* User reviews and ratings for facilities

**Technologies Used:**

* Kotlin
* HTML, CSS, JavaScript
* Spring Boot
* MariaDB, Derby
* Google Maps API
* Firebase for database management
* Bootstrap

**Link**: (This is the link to be account that uploaded the project, It was a group project) [JudasM/TnF-Booking (github.com)](https://github.com/JudasM/TnF-Booking)

**Hosting Information:**

This project is not hosted because it requires database connectivity, we are still figuring it out.

**Demo Video:**

To view the video of this website, click here ) [igris-marvin/sani (github.com)](https://github.com/igris-marvin/sani)

**Sani E-Commerce Web Application**

**Description:** The Sani E-Commerce platform is a sophisticated web application designed for the online retail of furniture. The platform offers users a seamless shopping experience with an extensive catalogue of high-quality furniture items, streamlined purchasing processes, and secure payment options.

**Key Features:**

* Comprehensive product catalogue with detailed descriptions and images
* Secure user authentication and account management
* Shopping cart and wish list functionality
* Integrated payment gateway for secure transactions
* Order tracking and management system
* Responsive design for optimal viewing across devices

**Technologies Used:**

* HTML, CSS, JavaScript
* Kotlin
* Spring Boot
* MariaDB, MongoDB
* Bootstrap
* Stripe API (for payment processing)
* Firebase (for user authentication and data management)

**Link:** (This is the link to be account that uploaded the project, It was a group project) [igris-marvin/sani (github.com)](https://github.com/igris-marvin/sani)

**Hosting Information:**

This project is not hosted because it requires database connectivity, we are still figuring it out.

**Demo Video:**

To view the video of this website, click here ) [igris-marvin/sani (github.com)](https://github.com/igris-marvin/sani)

**TripCalc Web Application**

**Description:** The TripCalc web application is designed to help users calculate time, speed, and distance based on input values. It serves as a quick and efficient tool for planning trips or estimating travel details by using basic mathematical formulas to determine either the time taken, the speed, or the distance covered.

**Key Features:**

* Input fields for time, speed, and distance
* Ability to calculate any of the three values when the other two are provided
* User-friendly interface with immediate feedback
* Responsive design for mobile and desktop use

**Technologies Used:**

* HTML, CSS, JavaScript
* Responsive design with CSS Flexbox/Grid
* Basic JavaScript functions for real-time calculations
* Input validation to ensure correct data entry

**Link:** (This is the link to be my account where I uploaded the project, It was a my project) [igris-marvin/sani (github.com)](https://github.com/igris-marvin/sani)

**Hosting Information:**  
Click here to access the web page ) [igris-marvin/sani (github.com)](https://github.com/igris-marvin/sani)

**Technical Skills**

* **Languages:** Java, Kotlin, HTML, CSS, SQL
* **Frameworks & Libraries:** Spring Boot, Bootstrap
* **Databases:** MariaDB, MongoDB, Derby
* **Tools & Platforms:** Firebase, Git, Linux, XAMPP
* **Other Skills:** Business Analysis, Software Testing, Database Development

**Soft Skills**

* **Critical Thinking:** Ability to analyse problems and develop effective solutions.
* **Team Collaboration:** Experience working in team settings, contributing to project success.
* **Innovation and Creativity:** Developing new ideas and approaches to improve processes.
* **Time Management:** Effectively managing time to meet deadlines and prioritize tasks.
* **Adaptability:** Quickly adjusting to new environments and challenges.
* **Active Listening:** Paying attention to details and understanding requirements.
* **Emotional Intelligence:** Understanding and managing emotions to communicate effectively.
* **Interpersonal Skills:** Building strong relationships with colleagues and stakeholders.

**Professional Development**

I am actively seeking internship opportunities in software development, engineering, or database administration. I am eager to contribute my energy, creativity, and dedication to the success of a dynamic team while furthering my professional development.

**References**

Available upon request.