

Bluetooth Scanning Application

Group 4

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ABSTRACT

The goal of this project is to implement a Bluetooth scanner application for Android devices using Android Studio. The application will scan for nearby Bluetooth devices and display their timestamp, RSSI (Received Signal Strength Indicator), and MAC address. The application will also run in the background and scan every minute to continuously update the list of nearby devices.

To achieve this goal, the project will follow the Software Requirements Specification (SRS) document that outlines the detailed requirements for the application. The SRS will define the functional and non-functional requirements of the application, including the user interface, Bluetooth scanning, background scanning, and power optimization.

The project will be implemented using Java programming language and Android Studio Integrated Development Environment (IDE). The application will use the Android Bluetooth API to scan for nearby devices and retrieve their information. The application will also use Android's background service to run in the background and scan every minute.

The user interface of the application will be designed using Android's layout XML files and Java code. The interface will display a list of nearby Bluetooth devices with their timestamp, RSSI, and MAC address. The user will also have the option to refresh the list of nearby devices manually.

To optimize power consumption, the application will use a low-power mode for Bluetooth scanning, passive scanning, and efficient data structures to store the scanned Bluetooth devices. The application will also use location-based scanning to only scan for Bluetooth devices in the user's vicinity.

The project will be developed using the Agile methodology, with an iterative and incremental approach to development. The project will involve several stages including planning, analysis, design, implementation, testing, and maintenance.

In conclusion, this project will provide an Android Bluetooth scanner application that can scan for nearby devices, display their information, and run in the background to continuously update the list of nearby devices. The project will follow the SRS document to ensure that all requirements are met, and the application will be developed using Android Studio IDE and Java programming language. The application will also implement power optimization techniques to reduce battery consumption and CPU usage.

