

An Android Mobile Application for Guide to Terrorism

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Abstract:

The way and manner the fundamentalist are penetrating our communities have posed serious threat to the populace, the government and the Army cannot be everywhere at the same time, the populace does not understand how to define terrorism due to its widely divergent views, the nature of terrorism, recognition of the terrorist and a terrorist threat is also not understood, properties and lives gone as a result of insurgency in the Northeastern part of Nigeria. This work is design to proffer instant reference guide and complement the Government and the Army to curb the activities of the terrorist and also to save lives. The designed, analysis and implementation were carried out using UML tools, Android studio (intelliJ platforms) and Java programming Language respectively. The application will serve as a reference guide for understanding terrorism and to allow the user to call or message the security personnel whenever there is an emergency using an android device as it will automatically show the user emergency number. When tested, the application have proven to guide and educate the populace on terrorism, it complements the government and the Army and also save lives and properties.

Keywords: Android Device, Terrorwatch, Smartphones and IntelliJ Platform.

1. Introduction

Violent extremist networks and ideologies will continue to be a threat in our community and our country for many years. Many areas of the world are experiencing great political, economic, and social unrest. The reasons for this unrest can be seen in conflicts in Nigeria and with neighboring countries, internal strife, dissatisfaction with governments in power, unconstrained population growth, declining resources, ethnic and religious hatreds. The ambition of these networks to acquire chemical, biological, and nuclear weapons is real, as is their desire to launch more attacks on our community and on our country.

The Android Mobile Application for Guide to Terrorism called, '*terrorwatch*', is intended to be a capstone reference guide that describes terrorism, recognizing the terrorist threats and highlights the nature of terrorism present in a full spectrum.

Despite the consistent menace of terrorism, threats can be misunderstood and frequently confused due to widely divergent views on how to define terrorism. The application at this level is simply a

tool to be used by those who require instant and immediate guide on terrorism and the terrorist threats. The application complements but does not replace Army training and intelligence products on terrorism, but is an instant solution in the absence of the Army.

Typical scenario includes: designation of bomb by a terrorist, being in a place where attack is taking place, when a terrorist is living around your neighborhood, and when a terrorist group are invading your environs, etc.

The high level of terrorism and violence in Nigeria by the fundamentalist group (Boko Haram) has heightened fears among the populace and the international community and the hostility has gone beyond religious or political coloration. Therefore the following problems have been identified, and needed urgent intelligent system:-

- I. Victim is always helpless in the event of weapons or firearms attack.
- II. The populaces are frequently confused due to widely divergent views on how to define terrorism.

- III. The populace does not understand the nature of terrorism and recognition of the terrorist and a terrorist threat.
- IV. Several meetings, summit, conferences etc have being held in a bid to curb the menace in the country but all to no avail.

The main aim of this study is to establish the following significance:-

- I. To design and implement an android mobile application for guide to terrorism.
- II. To give instant and immediate guide on terrorism and the terrorist threats.
- III. To proffer an instant solution on a way out of a terrorist attack in the absence of the Army.
- IV. To guide and save lives and properties in the event of a weapons or firearms attack, before the Army intervenes.
- V. To describe terrorism and recognizing the terrorist threats and highlights the nature of terrorism.

The significance of this study is that it will act as a reference guide to the populace while the Government and the Army in their quest to quell the problem of terrorism (Boko Haram) in Nigeria. Judging from the fact that terrorism is currently a prevailing cankerworm and is very spontaneous and topical, this study will help to proffer instant and immediate solution to Nigerians.

Also the terrorists (Boko Haram) have demonstrated significant resiliency after killing them and disruption of their activities by the Nigerian Army and with the counterterrorist action. We believe *terrorwatch* application will be an alternative way to guide Nigerians on the terrorist attack. More so, this work theoretically will be useful to writers, scholars, journalists etc. in order to add to their existing knowledge what they already know about terrorism and their activities.

2. Related Work

According to Lodge (1988) terrorism is an illegitimate means of attempting to effect political change by the indiscriminate use of violence. What lodge is trying to explain is that terrorism is a means of attempting to effect political change but it is illegitimate, it involves the use of violence? According to lodge, every act of terrorism is intended to effect a change in the political system. Cook (1989) described terrorism as an attempt to achieve a political end by creating a climate of fear through bombings, assassinations, kidnappings, and seizure of aircraft's. That is to say, those who involve terrorist activities use bombings, assassinations, kidnappings and seizure of aircraft's

mechanisms or strategies in order to create fear because when people are afraid, they tend to surrender to these who inflict them with the fear and terror.

Narrowing it down to Nigeria, there is no history of terrorism in the form of coordinated attacks to spread fears and undermine the government of the country until recently. Most studies have revealed many driving forces of terrorism, for the purpose of this research they are narrowed to three; these are fundamentalism, nationalism and secessionism.

In Justine (2013) the author discussed that technology is used in circumstances of intimate terrorism. He examines how technology is used as a batterer's tool in exerting coercive control over a victim. Also, he looked at the changes in the laws as the legal system strives to keep pace with the rapid advancement of technology. In particular, he analyzed the recent use of GPS monitoring of intimate terrorists. This analysis has identify some of the problems associated with the on-going legal changes. However, the same advancements also allow perpetrators to adapt and/or escalate their offending behavior (Elliott and McCartan, 2013).

In Mason and Shoshana (2012) the authors seek to place questions of surveillance technologies into a theoretical framework that foregrounds the challenges that new surveillance technologies pose to antiviolence movements. Specifically they address the impact of surveillance technologies in the practice of violence and some proposed solutions, and consider the ways that surveillance technologies are used disproportionately in the criminalization of marginalized groups. By placing violence against women at the centre of analysis aim to complicate concerns related to surveillance technologies.

In a US study on domestic violence and information technology, Dimond *et al* (2011) found that users of mobiles and social networks were making trade-offs between potential harm (e.g. continued abuse) and benefit (e.g. support). Worldwide, the sales of new Smartphone are forecast to reach 700 million by 2015 (Portio Research Report, 2011).

In Qualcomm Wireless Reach™ Report (2014) provided insight into the opportunities and challenges involved in delivering health related behavioral interventions through Smartphone apps. The findings suggested a number of valued features and characteristics that app developers may wish to consider when creating health behavior apps. Findings also highlighted several major challenges that appeared to be the need to further consideration and research to ensure the development of effective and well-accepted behavior change apps. In (report

by Vodafone, 2014) on Connected Women, How mobile can support women’s economic and social empowerment. The use of mobiles improves the women’s access to literacy, banking, health, empowerment and business opportunities.

In Sridher *et al* (2015) their experiments were performed using a Intel(R) Core(TM) i3 M380@2.53GHz CPU with 4GB RAM and 80 GB hard disk, android mobile with the support of wifi. In the development of the I safety (woman security application) mobile app the software requirements are Front End is Android Application, Web Application is Servlet Java development kit 1.6.0 or above, Eclipse IDE for Android , My Eclipse IDE for java web Applications Android SDK 20.0.1 , Connective wifi router software.

Their proposed system is designed in such a way that people can alert selected contacts that the person is in danger and share the location. With this personal safety app. The personal safety application requires the name and number of the person who is to be contacted in times of emergency. Users can add multiple people in the emergency contacts list. These are the people who will receive notifications or SMS in case of an emergency.

3. Research Methodology

The development of an android mobile application for guide to terrorism will be a reference guide to terrorism for everyone and for those who need it during emergencies.

In other to attain quiet a reasonable acceptance of the study, the researchers made use of the internationally accepted software engineering model the Object Oriented Analysis and Design (OOAD) which is the popular technical approach to analyzing and designing an application system by applying the object-oriented paradigm and visual modeling throughout the development life cycles to foster better stakeholder communication and product quality. The method of data collection used in this research study is the Secondary source which is also known as documentation. The researchers gather information from Journals, internet materials, various papers and articles which are relevant to the study.

To solve an actual problems in an industry, software developer or a team of developers must integrate with a development strategy that include the process, methods and tools layer and generic phases. This strategy is often referred to a process model or a software developing paradigm. Hence, this project

follows the waterfall model which is one of the software development paradigms.

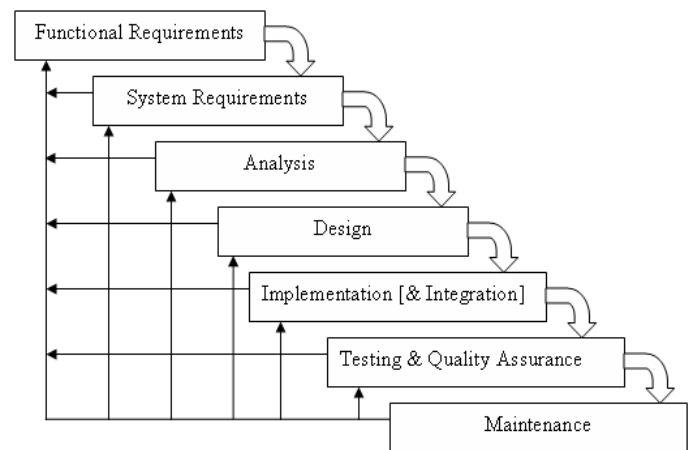


Figure.1: Waterfall Model

Again, one of the Object Oriented Design and Analysis CASE tools used in the modeling process of the proposed system is:

Use Case which Describes boundary and interaction between the user and the system. It gives generalized description of how a system will be *used* and provides an overview of what the system will do for the user. They are used in order to: design system from user’s perspective, communicate system behavior in user's term and enumerate all users’ visible behavior.

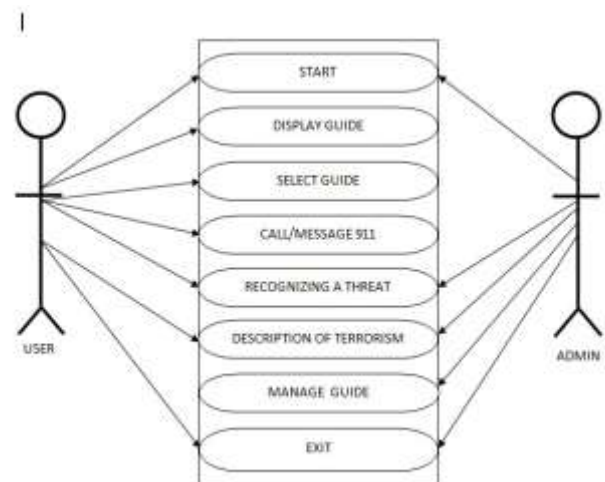


Figure 2: Use Case Diagram

Sequence Diagram which describes the interactions between users and systems in the system being designed; sequence diagrams add more information to these by showing interactions between system objects. It is used to add detail to use-case by showing the sequence of event processing in the system.

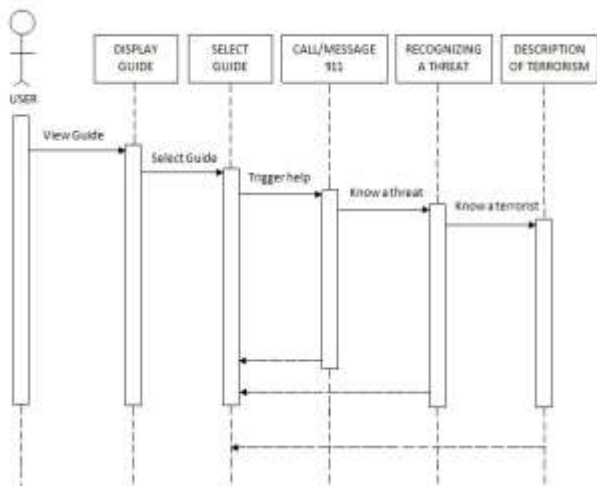


Figure 3: Sequence Diagram for Interaction between the User and the System

A. Analysis of the Proposed System

In this stage, the users of the system were interviewed in order to establish the goals, requirements, and services that the end-user requires and expects from the system. This involved proper definition of the problem.

The problem on which this project is based is the design and implementation of android mobile application for guide to terrorism that help to proffer instant and immediate guide on terrorism and the terrorist firearms and weapons event in the absence of the army. The proposed system will be fast, flexible, less prone to errors and save lives and properties.

B. System Design

Various processes are involved in the design of the system, the process cultivate to form a new system. The purpose of the design phase in this work is to specify a particular system that will meet the stated requirements.

Input Design

A process of converting user originated inputs to a computer-based format. Input design is an important part of development process since inaccurate input data are the most common cause of errors in data processing. Erroneous entries can be controlled by input design. It consists of developing specifications and procedures for entering data into a system and must be in simple format. In input data design, we design the source document that capture the data and then select the media used to enter them into the system. Validations are carried out on all the input fields so as to get data as accurate as possible

Output Design

Designing computer output should proceed in an organized manner; the right output element is designed so that users will find the system executed. When we design an output we must identify the specific output that is needed to meet the system. The usefulness of the new system is evaluated on the basis of their output. Once the output requirements are determined, the system designer can decide what to include in the system and how to structure it so that the required output can be produced.

For the proposed software, it is necessary that the output reports be compatible in format with the existing reports. The output must be concerned to the overall performance and the system's working, as it should.

It consists of developing specifications and procedures for data preparation, those steps necessary to put the inputs and the desired output, i.e. Maximum user friendly. Proper messages and appropriate directions can control errors committed by users. The output design is the key to the success of any system. The output must be concerned to the system's working, as it should. Output design consists of displaying specifications and procedures as data presentation. Users are never left with the confusion as to what is happening without appropriate error and acknowledges message being received. Even an unknown person can operate the system without knowing anything about the system.

Software requirement

This application has been tested and is compactable with android operating system, like Marshmallow 6.0, lollipop 5.0, kitkat 4.4, jelly bean 4.1, ice cream sandwich 4.0, honeycomb 3.0, gingerbread 2.3 and eclair 2.0.

Hardware requirement

System must be an android device to run *terrorwatch* application. Like Samsung, Techno, Infinix, Lenovo, ITEL phones and tablets, and some blackberry and lumia phones that runs android operating system.

System Development Tools

The development tool that was used in designing the system are: Android Studio android, (intelliJ platform), and Java.

4. Implementation

The implementation of the system is broken down into two:

- i. The front end
- ii. The Back end

C. Front End

The front end is an interface between the user and the back end. The front end is responsible for collecting inputs in various forms from the user and processing it to conform to a specification the back end can use. The following are some overview of our different interfaces:



Figure 4: Menu Page allows the user to select options



Figure 5: When the user tape on guide to terrorism button



Figure 6: When the user tape on recognizing a threat button



Figure 7: When the user tape on description of terrorism button



Figure 8: When the user tape call button



Figure 9: When the user tape message button

D. Back End

Using Android Studio (intelliJ platform) which contains; *build.gradle* is a **build system** that takes the best features from other build systems and combines them into one. It is a **JVM based build system** that is where you can write your own script in Java, which Android Studio makes use of. [Debugger](#) is a toolkit included in the Android SDK package. It consists of both client and server-side programs that communicate with one another. The ADB is typically accessed through the [command-line interface](#), [libraries](#) using the Android native Development Kit, the native classes can be called from Java code running under the [Dalvik VM](#) using the `System.loadLibrary` call, which is part of the standard Android Java classes, `res` folder is in the same directory as your `src`, it automatically takes all the source files (.java or .xml), then convert them to

dex files), and groups all of them into one compressed file, as APK file.

Android studio is preferred over other development environment for this work is because it has a build system called gradle contains [Maven](#)-based build dependencies, Build variants and multiple-APK generation and Advanced Android [code completion](#) and [refactoring](#) also android studio is the latest and a recommended development environment by Google.

5. CONCLUSIONS

This research is aimed at developing an android mobile application called *terrorwatch* for Nigerians. This will help understand the nature of a terrorist threat, methods of planning and action, and organizational structures commonly used by terrorists and terrorist organizations. To also be as an awareness or reference guide that describes terrorism, recognizing the terrorist threats and highlights the nature of terrorism present in a full spectrum and developed using Android Studio. Various reviews of related literatures on the subjects matter were consulted. Waterfall model was the software development model used to carry out this research.

Having developed an android application called *terrorwatch*, though it is subjected to modification of feature as time goes on. This application through its interactive interface will act as a reference guide to Nigerians and also save lives, no need for panicking again during, before and after the event of firearms and weapons or the intimidation exhibited by the terrorist.

For the improvement of this work we recommend that the application should be upgraded into an intelligence system that will be able to detect bomb and also using a mobile device with the application installed to scan for bomb and weapon.

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