Configuration Manual

MSc Research Project
MSc Cybersecurity

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MSc Project Submission Sheet

School of Computing

Student Name:	Waleed Mustafa………………………………………………………………………………
Student ID:	x20251785…………………………………………………………………………..……
Programme:	MSc Cybersecurity………………………………… **Year:** 2021/2022……………..
Module:	MSc Research project / Internship……………………………………..……
Lecturer:	Michael Pantridge……………………………………………………………..……
Submission Due Date:	15/08/2022……………………………………………………………..……
Project Title:	Secured proxy re-encryption with post-quantum cryptography for android and its performance bottlenecks………………………………..……
Word Count:	429…………………………… **Page Count:** 2…………………………..……..……

I hereby certify that the information contained in this (my submission) is information pertaining to research I conducted for this project. All information other than my own contribution will be fully referenced and listed in the relevant bibliography section at the rear of the project.
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Signature:	waleed………………………………………………………………………………………
Date:	12/08/2022………………………………………………………………………………

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Configuration Manual

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1   Purpose

This document is provided to serve as a Configuration manual for setting up the server and application of Secured proxy re-encryption with post-quantum cryptography for android and its performance bottlenecks project. This is a research project proposed by Waleed Mustafa (x20251785) student of MSc cybersecurity at the National College of Ireland.

To facilitate the committee's tasks, it is vital to provide the delivery with accurate, exhaustive, complete, and clear configuration instructions. The main components that should be completely and correctly described are the following:

- Prerequisites
- Configuration procedure

2   Pre-requisites

In this section, a list of installation prerequisites is mentioned that must be fulfilled before the installation can begin.

Prerequisites are of the order of

- Windows or Linux operating system
- NetBeans IDE, Android Studio, and Android Device
- JAVA added to System Environment Variables
- Have an account on Firebase.
- Make sure that ports 6000 and 6001 are not already in used

3   Configuration Procedure

Server

Step1: Open NetBeans (version 12.6 recommended).

Step2: In the menu bar click on the file button and drag your cursor to Import project and click from zip.

Step3: Find the zip file with the name "MyServerjava.zip" and click on import.

Step4: click on the services under the toolbar and expand the databases.

Step5: Add JDBC driver (version 8.0.29 recommended) and create a new derby database with username and password root.

Step6: Add 2 tables in the database Userdata (Username, Pubkey, Prikey, Keypair) and Filesuploaded(username, files).

Step6: Right-click on the database and select connect.

Step7: Open "MyServerJava.java" file and go to line number 129 and add the IP address of your android emulator.

At this point, your server is fully running.

Android application
Step1: Open the android studio
Step2: From the menu bar select the file > new and then click on import project.
Step3: Find the file name "MSProject.zip" and click on import.
Step4: Expand the package com.example.msproject and open the "signup.java" file.
Step5: Go to line number 60 and add the server IP there.
Step6: Open the "login.java" file go to line number 123 and add the server IP there.
Step7: Open the "Login_page.java" file go to line number 331 and add the server IP there.
Step8: Click on tools in the menu bar and select Firebase.
Step9: Click on "Cloud Storage for Firebase" select get started with cloud storage and follow the instructions to attach your file to Firebase.

Now click on the launch button to install and open your application in the android emulator. The application and server are now fully configured and running.