**Chapter 2**

**Literature Review**

* Introduction
* Problem Evaluation
* Introduction to the current Islamic Knowledge setting
  + What Knowledge are we implying?
  + Types of Lectures
  + Ways of Seeking Knowledge
* Points of Improvement
* Proposed System
* Specifications needed
* Disciplines to be considered during development

1. **Introduction**

In this chapter we wish to explain a brief overview of what we used as our tooling to develop

## Android and Android Studio

Android is a mobile Operating System(OS) developed by Google. It is used by several Smartphone and Tablets. Examples include the Sony Xperia, the Samsung Galaxy, and the Google Nexus One.

The Android operating system (OS) is based on the Linux Kernel. Unlike Apple's iOS, Android is Open source, meaning developers can modify and customize the OS for each phone. Therefore, different Android-based phones often have different graphical user interfaces GUIs even though they use the same OS.

Since Android is an operating system, its purpose is to connect the user and the device. For example, when a user wants to send a text, Android provides the user with a button to tap. When the user taps the button, Android directs the phone to send the text.

Every year, Google releases major updates to the Android operating system. Even though Google plays a major part in the development of Android, Google provides the Android operating system to manufacturers for free. HTC, Samsung, LG, Huawei, Lenovo, and Sony are just a few of the manufacturers that run Android on the devices they manufacture. Android is now running on one billion devices.

A common question that many people have is why Android seems to look different on different devices. The answer to this is that there are multiple versions of Android. Since Android is an open-source software, manufacturers are able to make changes to the software for better or for worse. The “pure” or “vanilla” version of Android is called stock Android.

**Android Studio** is an integrated development environment (IDE) for Google built on jetBrain’s intellij IDEA software and designed specifically for Android Development

Android Studio was announced on May 16, 2013 at the Google I/O conference. It was in early access preview stage starting from version 0.1 in May 2013, then entered beta stage starting from version 0.8 which was released in June 2014. The first stable build was released in December 2014, starting from version 1.0.

On May 7, 2019, Kotlin replaced Java as Google's preferred language for Android app development. Java is still supported, as is C++.

## Laravel - PHP Framework

Laravel is an open-source PHP framework, which is robust and easy to understand. It follows a model-view-controller design pattern. Laravel reuses the existing components of different frameworks which helps in creating a web application. The web application thus designed is more structured and pragmatic.

Laravel offers a rich set of functionalities which incorporates the basic features of PHP frameworks like Code Igniter, Yii and other programming languages like Ruby on Rails. Laravel has a very rich set of features which will boost the speed of web development.

It is one of the world’s most popular PHP framework for building web applications from small to large projects. Due to its performance, features and scalability, Laravel is the choice of professional developers. You can customize Laravel so quickly that you can build your own project structure to meet your web application requirements. You can write a code that is self-explicit and expressive by using the beautiful, elegant syntax of Laravel.

## GIT and GitHub

Git is a VCS — Version Control System What that really means is, Git helps us manage our project files. One of the primary things that git does and also the primary reason it exists is to keep track of the entire history of things that you are working on.

This is especially helpful for software developers because when you are working on a project you first build a basic version of it and then try to improve it by adding new features (or) just experiment with things. This whole process of experimenting with new features is incredibly error prone and you might wanna revert back to your original code.

This is where Version Control comes into play, it automatically tracks every minute change in your project and allows us to revert back to a previous version no matter how many times you changed your files.

Another awesome thing that Git allows to do is, it allows people to work together on the same project at the same time without disturbing each other’s files. Collaboration is all the more easier with Git.Team members can work on different features and easily merge changes.

Git is easy to learn and has a lightning fast performance. It outclasses other Version Control Systems like Subversion with features like cheap and local branching, convenient staging areas and multiple workflows.

GitHub is a web-based service for version control using Git. Basically, it is a social networking site for developers. You can look at other people’s code, identify issues with their code and even propose changes. This also helps you in improving your code. On a lighter note, it is a great place to show off your projects and get noticed by potential recruiters.

In short, Git is Version Control System and GitHub is a hosting service for Git Repositories.

## Adobe XD

Adobe XD is a vector-based digital design tool for websites and apps. Use it to create and collaborate on everything from prototypes to mockups to full designs.

Adobe first announced they were developing a new interface design and prototyping tool under the name "Project Comet" at the Adobe Max conference in October 2015. This was in response to the rising popularity of Sketch, a UX and UI design-focused vector editor released in 2010.

The first public beta was released for MacOS as "Adobe Experience Design CC" to anyone with an Adobe account on March 14, 2016. A beta of Adobe XD was released for on December 13, 2016. On October 18, 2017, Adobe announced that Adobe XD was out of beta.

## Postman

Postman is an interactive and automatic tool for verifying the APIs of your project. Postman is a Google Chrome app for interacting with HTTP APIs. It presents you with a friendly GUI for constructing requests and reading responses. It works on the backend, and makes sure that each API is working as intended.

In Postman, we create a request, and Postman looks at the response to make sure it has the element we want in it. As it is an automation tool, it drastically improves testing time and quality of the project. It helps in the early detection of bugs that might sprout at later stages and cause more damage to the system.

Postman is the way to streamline the process of API testing. All APIs that we create and deploy first rigorously go through Postman so that any major or show stopper bugs are identified on time and fewer bugs leak through to later stages.

## Visual Studio Code

It is a code editor made by Microsoft for Window, Linux and MacOS

Visual Studio Code was announced on April 29, 2015, by Microsoft at the 2015 Build conference. A Preview build was released shortly thereafter.

It Support most common languages. This basic support includes syntax highlighting, bracket matching, Code Folding, and configurable snippets. Visual Studio Code also ships with IntelliSense for JavaScript, TypeScript, JSON, CSS, and HTML, as well as debugging support for Node.js

## Visual paradigm

Visual Paradigm, a software design tool tailored for agile software projects. It supports UML, BPMN, ERD, DFD, SysML. It also supports use cases, wireframeing, code engineering, etc.

## Microsoft Visio

Microsoft Visio is a diagramming and Vector graphics application and is part of the Microsoft Office family.

It is used to create simple or complicated diagrams. It offers a wide variety of built-in shapes, objects, and stencils to work with.

Microsoft first created visio in 2013 and it was fully developed in 2015 and it was known as visio 2016

## C Panel

cPanel is an online Linux-based graphical interface (GUI) used as a control panel to simplify website and server management. cPanel allows you to publish websites, manage domains, organize web files, create email accounts, and more.

cPanel is one of the most popular Linux-based control panels for web hosting accounts. It lets you conveniently manage all services in a single place. Currently, cPanel is the industry standard and most web developers are well acquainted with it.

## Google Play Console

Google Play Developer Console is the platform that Google provides for Google Play and Android developers to publish.

In other words The Google Play Console is how you publish apps and games on Google Play. But that's just the start... discover what else you can do with the Play Console and the features that can help you improve your app's quality and grow your business.