# INTRODUCTION

In this project proposal report, our aim is to explain and illustrate the digital application distribution app that we will implement. This report will describe the purpose of our project, the overview of the project, the requirement of the project including both functional and nonfunctional requirements, the limitations and contraints of the project, and in the end an Entitiy-Relationship (E/R) diagram to illustrate how the project will be designed.

The purpose and the overview of the project will explained in the Project Description chapter. In this chapter, we will describe the application system our team is proposing, why we use database to implement such a system and how we will apply the concept of database in our application.

The Requirements section which will be divided into two subsections, Functional Requirements and Nonfunctional Requirements will explicity define as stated in the name of the sections, the functional requirements and nonfunctional requirements of the system. The functional requirements are the requirements that describe the actions of a system relating to particular conditions. The nonfunctional requirements are requirements that describe the behavior of the system in general and contraints that affect its performance or process.

The Limitations section will list all the restrictions and boundaries of the application. These restrictions are specific restrictions on what user can or cannot do.

In the end, we will illustrate a conceptual design which will be an E/R diagram to summarize the essential design of the application.

# PROJECT DESCRIPTION

The key idea is to implement a web based system that allows users to download applications to their devices. Apple’s App Store or Google’s GooglePlay are examples to such systems.

The system allows its users to be able to comment on the applications and rate the applications they have downloaded. Every user is required to meet minimum specifications that is set by each application they want to download. Users are required to set up an account in which they will be able to perform any action related to the system.

There two specific users that have additional features, developer and editor. A developer can request an editor to publish an application to the system. The editor has the ability to either approve or deny the request. Features of the system will be listed and explained in more detail in the Functional Requirements section of the report.

The project will be implemented with SQL standart language.

## 2.1 Why Database Is Used in the System

Database is a stored collection of data. Our system’s most crucial purpose is to be able to save the data to be able to distribute it efficiently and systematicly. Some persistent data management has to be done in order to achieve that purpose. Hence, database is the most beneficial solution.

The system has to continuously save all the account information of a user, all the attributes of an application and the application itself, all the settings bound to a user, all the comments and rates of an application, etc.

## 2.2 How Database Is Applied to the System

Our database will provide the users the access of various applications. Each application can be searched through its name. The database will also provide a collection of comment data of each application which the users can see, read and decide whether they want to download the application according to the comments.

The database is also essential with saving the account information of each user so that the users will have the ability to access their information, modify it or look through their downloaded applications.

# 3.0 FUNCTIONAL REQUIREMENTS

**3.1 Users**

* The users should comment and rate the applications that they had downloaded.
* Users should add applications into their wish list.
* Users can have different payment methods to buy a paid application.
* Users should inform the system about any error they faced and those errors must be solved by a support person on the system.
* Users should see their favourite applications respect to their statistics about applications they have.
* Users can search for applications by their names or find them from categories.
* Each user should personalize their account by the changing preferences on their settings

**3.2 Editors**

* Editors can determine the popular and suggested apps
* Editors can give information about suggested apps.
* Editors should approve or deny the requested that come from developers to publish a new app or an update.

**3.3 Developers**

* The users can apply for developer account in order to uploading new apps.
* Developers should send a request to editors in order to upload a new application or an update.
* Developers can determine cost for its applications.

**3.4 System**

* There should be a frame for each category in the application market.
* The system should check the age of users to show appropriate category.
* The system should keep all the devices that a single user has so that the user can use the application from different devices.
* The system should hide the applications from users that cannot fulfil the system requirement.
* The system should check the comments to determine convenience of the comment before publishing

**3.4 Settings**

* Settings of each users must be kept in the system for each device a user has.
* Settings must be adjusted by users and those changes must be saved.
* There must be option for auto or manual updating in settings.
* There can be an option for downloading apps only by WIFI or enable to download with cellular data.

# 4.0 NON-FUNCTIONAL REQUIREMENTS

PRIVACY:

* User’s application usage information and owned apps should not be seen by another user.
* Personal information and user activities can only be seen by the system administrators.

RELIABILITY:

* The system should be always active for usage and download.
* The user password should have at least 7 characters and at most 16 characters. Characters should have at least 1 upper-case character and at least one number.

SECURITY:

* All applications in the system should have ensure that they have verified certificate.
* Malicious applications should not be in the application market.

MAINTABILITY:

* The system should keep all applications up to date.

PERFORMANCE:

* Each data query in the database should be take less than 1.2 second.
* The system should provide 100 concurrent downloads from different users.

LEGAL:

* The system should provide terms of service and privacy policy for signing up.
* There should be determined age restriction for each application in the application market.
* Users should have at lest 7 years old to sign up for and the system should secure that.

INTERFACE:

* The system should give detailed information and update information about each application to the user.

USABILITY:

* Even the new users can easily adapt the system and use functionalities of the system without any prior knowledge about the system.
* System should have help section that answers to the frequently asked questions.

