

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Project Background**

Universiti Tun Hussein Onn Malaysia (UTHM) is a public Malaysian university that focused on engineering field and vocational training (TVET) with along general course of management business and computer science. The campus is filled with talented student and always encourage development and skills for student throughout competition, events and program industry-ready skills. Fakulti Sains Komputer dan Teknologi Maklumat (FSKTM) is main faculty focused for computer science student and keep being represent UTHM in competition related with software technology. One of main goals UTHM is to prepare students for industry challenges with program development talent.

Until now, the management of faculty still using manual data management to manage the data of talented students from FSKTM via office room through local computer machine and paper documentation. The data of students is collected via paper forms filled by students and lecturers. The access to data is limited because of record kept in office, only accessible during office hours. Lastly only office admin has permission to access the data for recording or analysing it.

The problem of this process is that it limits the accessible of records due to physical access during office hours in the office. The collected data also may be insufficient and inefficient because of lack student filling their data manually. This lead to dependence on lecturer to gather and collect data of talented students.

The solution proposed for these issues is to build and develop Student Talent Profiling App, which will involve users from students, lecturers and administrators.

The application can help students to register and create their own profile talent while keep updating it from mobile phone. The feature offered such submit achievements, tag skills and talent in real-time. For lecturers, they can insight and view talented students to recruit them in any competition and campaign. Administrator will manage data remotely through dashboards website with function like analyse data and generate report.

## **1.2 Problem statement**

The problem with current issues is reliance on traditional methods. The usage of paper-based documents and local digital storage on local machine computers will make the data unsharred and access online among the staff, lead to bottlenecks during urgent tasks. This limit access the data because local machines are specified to store the data.

Time is constrained because office hours dependency only allows the staff to access the data during office hours, it is inflexible for staff and lecturers to submit new data of students outside the office hours.

Inefficient collection of data since it only reliance on lecturers to identify and search for talented students among their students themselves. Manual paper forms provided by the office is unattractive for students to fill and not effective since the students prefer digital engagement.

## **1.3 Objective**

The objectives of this system are to:

1. To design a student talent profiling app system using object-oriented approach.
2. To develop student talent profiling app systems using web-based and android technology.
3. To test the developed system.

## 1.4 Scope

The student talent profiling app is based on educational technology domain, this study domain focused on development and implementation of digital platforms in web-based and android technologies to create and manage student talent profile. The domain will enhance student development and educational assessment to create student with capabilities of surviving after graduation. It also uses data management and data mining to create and manage the student data with systematic, effective and efficient.

The case study is located on faculty of FSKTM in UTHM Parit Raja, Johor with the staff of faculty assistance to help guiding the process of managing student record and data.

Students, lecturers and office administrators are involved in this process. The students are the main target because of their data and record since this app is collecting their data, processing and storing it for office usage. For lecturers, they can insight their own student talent such data of performance, record of skills and activities the student have joined. The office administrator will manage all the process and data record of student for analysis and help make decisions for student development planning in the future.

The user list is student, lecturer and office administrator, where the student can fill their own data into the app, lecturer can view and insight their student profile and lastly office administrator can generate reports, manage records and analysis the data for better decision making.

The function system of this app is student profile management. The students can create their own profile, update it from time to time to ensure that the data is latest and updated. Talent category management will allow users to define and categorize the talents the student record has. Achievement management can add any certification students have and link it with official proof of certification. Reporting and analytics

will generate student reports based on their achievement and talent listed. Data management can secure data storage and retrieval with cloud storage.

### **1.5 Expected result.**

The expected outcome of this student talent profiling app is to make students aware of their talent and opportunities UTHM can provide to them. This also can enhance student motivation to develop more talents and skills for themselves. For lecturers, they can identify and view talented students in the faculty with better experience. They also can guide the talented students to achieve new talent and skills in the future. Office administration can record all talented student data for reference in the future.

### **1.6 Project Significance**

The advantages of this project include students filling in their own data to the management for better planning and actions to be taken in the future while studying normally. The capability to fill their own data by using the app will improve the user experience and awareness of these data as students before graduation. The lecturer can view and search for any talented students to guide them in getting new talents or competition. The administrator can generate reports and use it for decision-making.

### **1.7 Chapter Organization**

This report contains six chapters as follows:

Chapter 1 describes the introduction of the project background, problem statement, objective, scope, expected result, methodology, project planning and project significant.

Chapter 2 reviewed all the relevant theoretical literature used in the proposed system.

Chapter 3 describes the relevant methodology for the proposed system.

Chapter 4 explains the analysis and design of the development system.

Chapter 5 explains the implementation and testing of the development system.

Chapter 6 describes the conclusion and future work for the proposed system.

