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|  | **MINISTRY OF EDUCATION AND TRAINING** |

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| **FPT UNIVERSITY** | | |
| CAPSTONE PROJECT DOCUMENT | | |
| **MOBILE DATING APPS** | | |
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| **Capstone Project code** |  |

- Ho Chi Minh City, May/2015 -

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**Definition, Acronyms, and Abbreviations**

|  |  |
| --- | --- |
| **Name** | **Definition** |
| MDA | Mobile Dating Apps |
|  |  |

# Report No.1 Introduction

## Project Information

* Project Name: Site Builder for Product Catalogue
* Project Code: MDA
* Product Type: Mobile application
* Start Date: May 11, 2015
* End Date: September 3, 2015

## Introduction

These days, the number of mobile phone devices is rapidly increasing and various applications aiding people’s need for socializing have been being released. However, there have not been many dating services releasing for Vietnamese based customers. The existing Vietnamese dating applications currently lack of various convenient and exciting features. Therefore, we are passionate to create a new stimulating dating application. This application, while retaining crucial features of a basic dating app, will provide reliable means to meet new people matching ones’ interests that are more advanced than other Vietnamese dating services.

## Current Situation

Zalo, Beetalk and Ketnoi.vn are the three most popular dating service applications in Viet Nam. Despite their popularities, they do not provide a wide range of features.

* Zalo is best known for its voice messaging and free to use. However, the app has limited finding features and no matching function.
* Beetalk allows users to find others users who are using the app nearby. Like Zalo, the app doesn’t have any matching features. It only let users browse through different profiles.
* Ketnoi.vn despite being a well-known dating website in Viet Nam, it is web-based only, and users have to go through a complicated process to connect with new friends.

## Problem Definition

Although many social mobile applications mentioned above introduce a lot of features, they do not provide matching function. They also don’t do well on location based searching, as they only show people who are nearby but not where they are on the map. Moreover, dating applications with better features are not yet available in Viet Nam’s market.

## Proposed Solution

### Feature functions

MDA is a mobile based social application developed to enhance users’ experiences. Its main feature is to help users make new friends who are matched with them base on the similarity on their profiles. MDA will automatically retrieve information found on users’ current social accounts (Facebook, Google+) and connect users with their friends who also use this app from their contact lists.

MDA supports basic social communication functions such as chat or find new friends. It also uses location based service to define users’ surrounding friends who will be visible on the map. Furthermore, MDA gives users opportunities by suggesting people they might want to meet based on their friend connections.

### Advantages and disadvantages

- Advantages:

* Make easier to find suitable friends.
* Enhance interface and users’ experience with integrated map.
* High customized for Vietnamese.

- Disadvantages:

* Require a large number of users to work well.
* Only support android system at this time.

## Functional Requirements

Function requirements of the system are listed as below:

* Mapping current account and friend list from social network (Facebook, Google+)
* Show current location map and display friends nearby user.
* View friend’s profile.
* Suggest friends who users might want to meet base on friend connection.
* Real-time chat with available friends.
* Notify when event occurs.
* Administrator controller dashboard.

## Role and Responsibility

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Full Name** | **Role** | **Position** | **Contact** |
| **1** | Nguyễn Huy Hùng | Supervisor | Instructor | hungnh@fpt.edu.vn |
| **2** | Phạm Văn Thắng | Developer | Leader | thangpvse61092@fpt.edu.vn |
| **3** | Man Huỳnh Khương | Developer | Member |  |
| **4** | Lê Văn Hùng | Developer | Member |  |
| **5** | Vũ Nhật Anh Khoa | Developer | Member |  |

Table 1: Roles and Responsibilities

# Report No.2 Software Project Management Plan

## Problem Definition

### Name of this Capstone Project

Mobile Dating Apps (MDA).

### Problem abstract

The product, while emphasizing on finding nearby friends and matching features, will show to users where their friends are on the map. In addition, users’ information will be collected from their social media accounts like Google+ and Facebook for matching. Basic communication functions such as chat, manage friends will be done thoroughly.

### Project Overview

#### Current Situation and Disadvantages

Viet Nam’s smartphone owners as of 2014 has hit 21 to 22 million (1). Despite the majority of smartphone usage involves watching video, reading news and listening to music, dating service still is a promising market, with 10% of smartphone users are using location based dating app (2). However, current dating services for Vietnamese customers do not provide matching function and have very limited GPS searching feature.

This project will need a large number of users to work properly, as we have limited marketing tools to compete with bigger competitions such as VNG (Zalo) and Beetalk. The final product will only support android system at the end of the project since it requires more time and resources to develop the app for other mobile phone operating system.

#### The Proposed System

##### Web Site

Administrator controller dashboard

##### Mobile Application

**Guest:**

* Sign up

**User:**

* Log in
* Log out
* Mapping current account from social network (Facebook, Google+)
* Show current location map and display friends nearby user.
* View friend’s profile.
* Suggest friends.
* Real-time chat.
* Notification.

#### Boundaries of System

* Only support Android system at the moment

#### Development Environment

##### Hardware requirement

For mobile:

|  |  |  |
| --- | --- | --- |
| **Mobile** | **Minimum Requirements** | **Recommended** |
| **Internet Connection** | 2 Mbps | 4 Mbps |
| **Operating System** | Android 4.0 | Android 4.4.2 |
| **Hardware** | NFC supported | NFC supported |

For server:

|  |  |  |
| --- | --- | --- |
| **Windows** | **Minimum Requirements** | **Recommended** |
| **Internet Connection** | Cable, Wi-Fi (4 Mbps) | Cable, Wi-Fi (8 Mbps) |
| **Operating System** | Window Server 2008 | Window Server 2008 |
| **Computer Processor** | Intel® Xeon ® 1.4GHz | Intel® Xeon ® Quad Core (12M Cache, 2.50 GHz) |

##### Software requirement

Android Studio: use to code client application

### Software Process Model

In this project, we decided to use the Scrum model for developing.



Figure 1: SCRUM Overview Diagram

Because of the project characteristics, we decide to make progress in series of sprints which are time boxed iterations in one week. At the beginning of one sprint, through sprint planning meeting, all team members will discuss together to define sprint backlog which is suitable to be completed within a week. Daily meeting and online conference are used to manage all activities and issues troubleshoot. At the end of sprint, product owner and developer team will review completed product to figuring out the necessary changes for products.

### Roles and responsibilities

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Full name** | **Team Role** | **Scrum Team Role** | **Responsibilities** |
| 1 | Nguyễn Huy Hùng | Supervisor | Product Owner | * Outline work in scrum backlog * Answer question and deliver direction |
| 2. | Phạm Văn Thắng | Team Leader | Scrum Master | * Facilitate productivity – maximize team performance * Complete all individual work |
| 3. | Man Huỳnh Khương | Team Member | Scrum Team Member | * Commit individual product on time * Support each other to complete team work |
| 4 | Lê Văn Hùng | Team Member | Scrum Team Member | * Commit individual product on time * Support each other to complete team work |
| 5 | Vũ Nhật Anh Khoa | Team Member | Scrum Team Member | * Commit individual product on time * Support each other to complete team work |

Table : Project Role and Responsibility

### Tools and Techniques

* Android Studio

## Project Management Plan

### Software development life cycle

Every sprint begins with sprint planning meeting, in which the Product Owner and team discuss the prioritized tasks in product backlog then add that tasks to sprint backlog. Once the time team commit sprint backlog, Product Owner can’t add more task.

During daily meeting, team have online meeting to update task status, discuss solution to challenges. It happens each day of the sprint.

At the ending of the sprint, that have a sprint review meeting, in which team present it works to the Product Owner. Project Owner decides each task is met acceptance criteria or not. If a task isn’t accepted, it’s rejected as incomplete.

All team also gather after end of each sprint to share what worked, what didn’t, and how processes could be improved. This meeting is called the sprint retrospective meeting.

### Phase Detail

#### Phase 1: Sprint 1

## Coding Convention

This project is applied some coding convention rules as listed below.

The following lists the coding conventions used in the Java projects. Those contents are taken from Google Java Style (3).

#### Source file structure

A source file consists of, in order:

* License or copyright information, if present
* Package statement
* Import statements
* Exactly one top-level class
* Exactly one blank line separates each section that is present.
* When a class has multiple constructors, or multiple methods with the same name, these appear sequentially, with no intervening members.

#### Formatting

* Braces are used where optional: Braces are used with if, else, for, do and while statements, even when the body is empty or contains only a single statement.
* Nonempty blocks K & R style: Braces follow the Kernighan and Ritchie style ("Egyptian brackets") for nonempty blocks and block-like constructs:
  + No line break before the opening brace.
  + Line break after the opening brace.
  + Line break before the closing brace.
  + Line break after the closing brace if that brace terminates a statement or the body of a method, constructor or named class. For example, there is no line break after the brace if it is followed by else or a comma.
* Empty blocks: may be concise.

#### Naming

* Package names: Package names are all lowercase, with consecutive words simply concatenated together (no underscores). For example, com.example.deepspace, not com.example.deepSpace or com.example.deep\_space.
* Class names: Class names are written in UpperCamelCase. Test classes are named starting with the name of the class they are testing, and ending with Test. For example, HashTest or HashIntegrationTest.
* Method names: Method names are written in lowerCamelCase. Method names are typically verbs or verb phrases. For example, sendMessage or stop.
* Constant names: Constant names use CONSTANT\_CASE: all uppercase letters, with words separated by underscores.
* Non-constant field names: Non-constant field names (static or otherwise) are written in lowerCamelCase. These names are typically nouns or noun phrases. For example, computedValues or index.
* Parameter names: Parameter names are written in lowerCamelCase. One-character parameter names should be avoided.
* Local variable names: Local variable names are written in lowerCamelCase, and can be abbreviated more liberally than other types of names. However, one-character names should be avoided, except for temporary and looping variables.

#### Programming Practices

* @Override: always used: A method is marked with the @Override annotation whenever it is legal. This includes a class method overriding a superclass method, a class method implementing an interface method, and an interface method respecifying a superinterface method.
* Static members: qualified using class: When a reference to a static class member must be qualified, it is qualified with that class's name, not with a reference or expression of that class's type.

Reference:

1. Tech in Asia, September 2014, Viet Nam’s smartphone users number *<https://www.techinasia.com/oops-vietnam-22-million-smartphone-users-33-million>*
2. The Guardian, February 2015, location-based dating app user percentage *<http://www.theguardian.com/technology/2015/feb/17/mobile-dating-apps-tinder-two-thirds-men>*
3. Google, 2014, Java Style Guide <<https://google-styleguide.googlecode.com/svn/trunk/javaguide.html>>