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| **MINISTRY OF EDUCATION AND TRAINING** |
| **FPT UniverSITY** |

Capstone Project Document

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| [Ordering Application by Location] |
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| |  |  | | --- | --- | | **<>** | | | **Group Members** | <Nguyễn Quốc Đạt><SE04036><datnqse04036>  <Nguyễn Đại Thắng><SE04441><thangndse04441>  <Ngô Ngọc Tuyên><SE04335 ><tuyennnse04335>  <Mai Gia Tú><SE04012>< tumgse04012>  <Vũ Sỹ Tùng><SE04113><tungvsse04113> | | **Supervisor** | Lương Trung Kiên | | **Ext Supervisor** |  | | **Capstone Project code** | OAL | |

**Ha Noi, 0****5/2018**

# Introduction

## Purpose

Introduction chapter introduces the background and initial idea of the Capstone Project. In this chapter, we – the developing team – will provide information about what we do, the reason why we do and the positive effects that our product contributes to prevent unwanted contents on the Internet coming to users. By comparing to the similar existing solutions, we also shows advantages, benefits, limitation and risks that our system has to face up to in the future.

## Project Information

|  |  |
| --- | --- |
| Project Name | Ordering Application by Location |
| Project Code | OAL |
| Project Category | Development |
| Application Type | Application and Website |
| Timeline | From May 2018 to Sep 2018 |

## Team information

### Supervisor

|  |  |  |  |
| --- | --- | --- | --- |
| **Full Name** | **Phone** | **E-mail** | **Title** |
| Lương Trung Kiên | 0983357211 | [kienlt@fpt.edu.vn](mailto:kienlt@fpt.edu.vn) | Lecturer |

**Table 1-1**: Supervisor information

### Team members

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Full Name** | **Roll Number** | **Phone** | **E-mail** | **Role in Group** |
| 1 | Nguyễn Quốc Đạt | SE04036 | 0942281296 | [datnqse04036@fpt.edu.vn](mailto:datnqse04036@fpt.edu.vn) | Team Leader |
| 2 | Ngô Ngọc Tuyên | SE04335 | 0964346976 | tuyennnse04335[@fpt.edu.vn](mailto:KhoaNDSE60811@fpt.edu.vn) | Member |
| 3 | Nguyễn Đại Thắng | SE04441 | 01686396395 | thangndse04441[@fpt.edu.vn](mailto:OwokonuSE04494@fpt.edu.vn) | Member |
| 4 | Mai Gia Tú | SE04012 | 0972678655 | tumgse04012[@fpt.edu.vn](mailto:ManhPHSE06191@fpt.edu.vn) | Member |
| 5 | Vũ Sỹ Tùng | SE04113 | 0916606094 | tungvsse04113[@fpt.edu.vn](mailto:ManhPHSE06191@fpt.edu.vn) | Member |

**Table 1-2:**Team’s members information

## Background

Nowadays, Viet Nam becomes one of the fastest growing Internet applications countries in the world. Number of Viet Nam Internet user is 58 million, ranked No.1 in ASEAN on number of national domain name, ranked No.30 worldwide on number of IPV4 address. But, Internet in Viet Nam is grown unevenly, fast develop in big city, exactly, Ha Noi and Ho Chi Minh, and slowly develop in other cities.



*Nowadays,* as analysis, as Vietnam E-commerce Association, Vietnam's e-commerce growth rate in 2017 is 25 percent and this rate can increase in period 2018-2020. As “We are social” website, mobile connection rate in Viet Nam is 153% as total population in 2017. 73% of Vietnamese have unique mobile, as well as, 50% Vietnamese use mobile social. In the other hand, 47% digital user buy products via her/his smartphone in Dec,2017. For which, 16% Vietnamese phone user search for contents based on location on his/her smartphone. So, there is no e-commerce shopping application/website allow user can search products/store based on user’s current location.

TOTAL
POPULATION
INTERNET
USERS
ACTIVE SOCIAL
MEDIA USERS
UNIQUE
MOBILE USERS
ACTIVE MOBILE
SOCIAL USERS
JAN
2018 A SNAPSH...

**Số liệu thống kê về xu hướng sử dụng phương thức kĩ thuật số ở Việt Nam năm 2017**

**(Nguồn :** **wearesocial.com)**

37
NUMBER OF UNIQUE
MOBILE USERS (ANY
TYPE OF HANDSET)
MOBILE PENETRATION
(UNIQUE USERS vs.
TOTAL POPULATION)
TOTAL NUMBER...

**Số liệu thống kê về người dung điện thoại và kết nối điện thoại ở Việt Nam năm 2017**

**(Nguồn :** **wearesocial.com)**

44
SEARCHED ONLINE
FOR A PRODUCT
OR SERVICE TOBUY
VISITED
ANONLINE
RETAIL STORE
PURCHASED A
PRODUCT OR
SERVICE ONLINE
MADE...

**Số liệu thống kê về xu hướng mua sắm trực tuyến ở Việt Nam tháng 12 năm 2017**

**(Nguồn :** **wearesocial.com)**

As Director of Consumer Behaviour Research of Nielsen INC, e-commerce in Vietnam has not reached the expected due to user concerned about the quality of goods, long shipment time,..

E-commerce shopping has some advantages are convenient, every-when-buying, easy payment. But, it also has many disadvantages hard to check product’s quality, hard to check store’s service, long shipment time, so on.

## The capstone aim

The aim of this capstone project is to design and develop an E- Shopping Application, on which End-user can search for products such as housewares, customer goods, electronics, .. and order it through nearby store related to their current location. The store can not only add new products, remove and change price and promotion of products, but also to accept or to decline the ordering.

## Literature review of existing system

### Name of current system

* Shopee: a shopping application which belongs to Garena – a consumer Internet platform provider based in Asia. This application allows user register virtual store in system. The end-user not only can search so many kinds of product through Search box or category, but also to order these products through registered virtual store.
* Lazada: a shopping application which belongs to Alibaba – one of top 10 most valuable and biggest companies in the world. This application allows end-user search products, view products as category, order products through before-registered virtual stores.
* Groupon: an electronic commerce shopping application which belongs to Groupon Inc. This application has same basic function as other e- commerce shopping applications such as: search products, order products, register store, …. Groupon app, in other hand, have a unique function which is locate nearby store to user’s current location.

### Strength of existing system

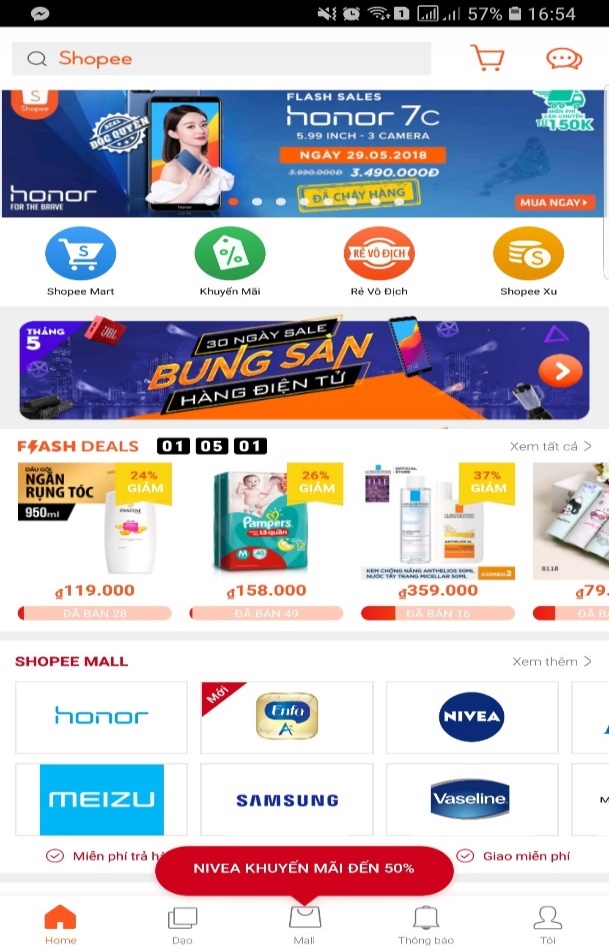
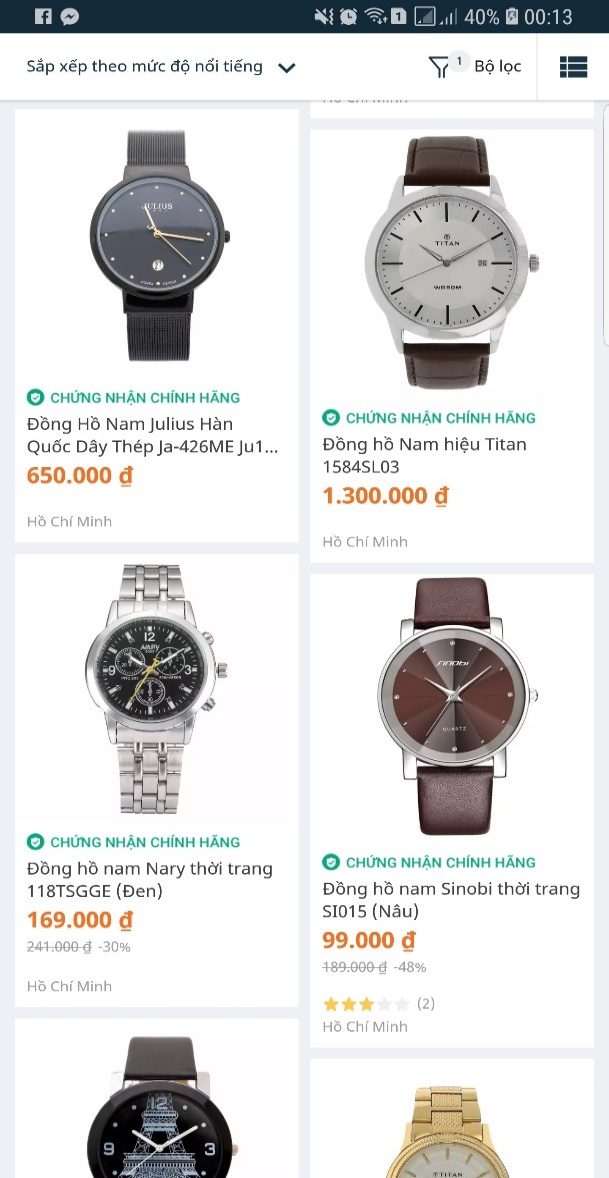
1. Shopee
   * Large community.
   * Colourful, nice user-interface, great user-experience.
   * Promotion programs are usually, attractive.
   * Support website platform.
   * User can comment, rate and report to virtual stores.
2. Lazada
   * Large community.
   * Nice user-interface, great user-experience.
   * Promotion programs are usually, attractive.
   * Support website platform.
   * User can comment, rate and report to virtual stores.
   * Have some kinds of genuine.
3. Groupon
   * Colourful, nice user-interface, great user-experience.
   * Promotion programs are usually, attractive.
   * Support website platform.
   * Unique function: locate nearby store to user’s current location.

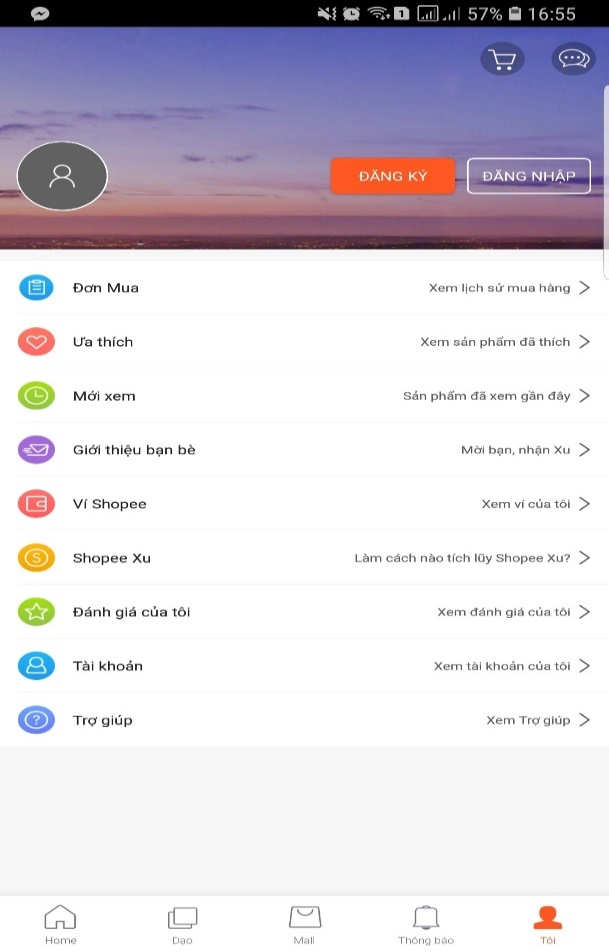
### Weakness of existing system

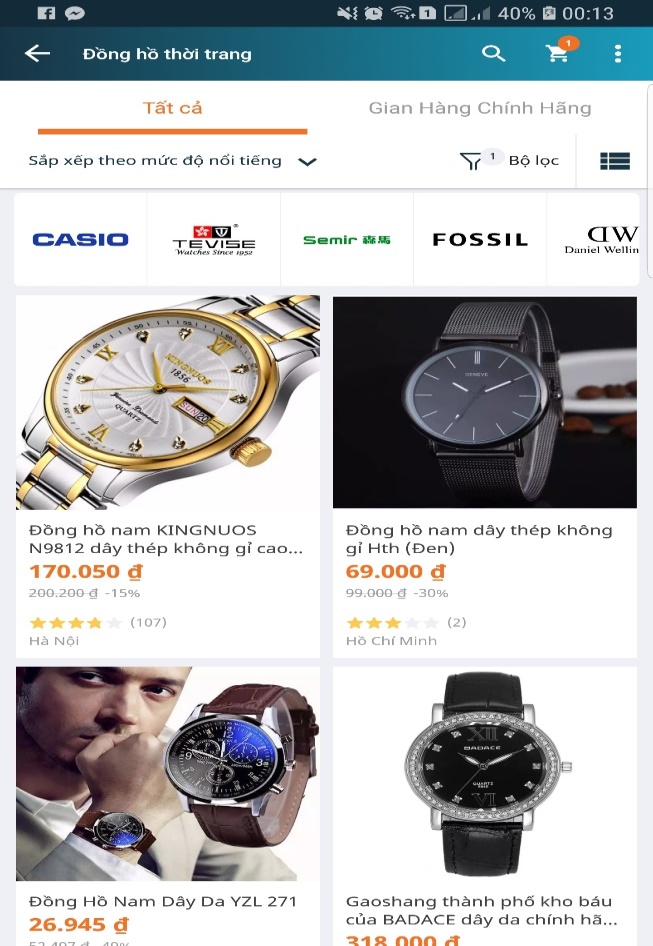
1. Shopee
   * Management virtual store is hard.
   * Sources of product are uncensored.
   * Shipment time is usually long.
   * Hard to find nearby stores to user’s current location.
2. Lazada
   * Management virtual store is hard.
   * Sources of product are uncensored.
   * Shipment time is usually long.
   * Hard to find nearby stores to user’s current location.
3. Groupon
   * User cannot report to virtual stores.
   * Application do not work in Viet Nam

### To acquire knowledge

1. Shopee + Lazada







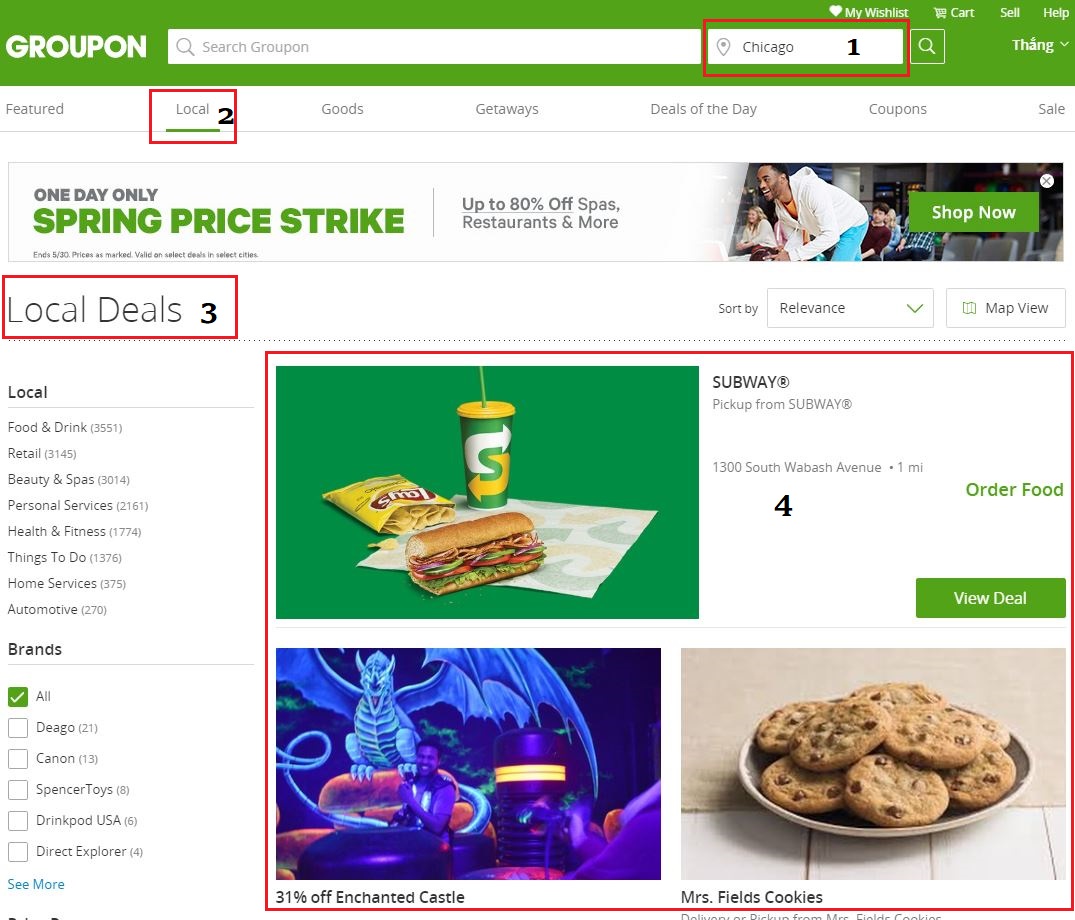
We can learn more from user-interface; how to arrange components in application screen; how ordering business works; how to display products, categories, product details in colorful, clearly layout.

1. Grab



We have learned how the application locate user’s current location, how application identify nearby target to user’s current location in local map, how application direct the way to target.

1. Groupon (Website version)

We have learned how the application identify nearby target deals to current chosen place (location), how the application identifies chosen place (location).

## Our Proposal

### Situation

* Nam is a high-school student in Hung Yen. This May, he would take part in FPT University entrance exam in Ha Noi. So, he decided to arrive to Ha Noi 1 day early to visit Ho Chi Minh museum, Lotte building,..
* After visiting Ho Chi Minh museum, Nam had arrived to Lotte building and he felt thirsty. He decided to find a grocery or mini mart to buy a beverage bottle and an ice-cream but he couldn’t. He had walked all the Chua Mot Cot Street, he saw fashion shops, souvenir shops, restaurants but no grocery. Then, he tried to walk all the Dien Bien Street and he got same result.
* This is a typical situation which indicates difficulty in finding grocery or mini mart on strange place where users haven’t even arrived.
* 3S will help finding grocery becomes easy.

### Ideas

* To support end-user can find nearest store to order products.
* To minimize product delivery time to end-user.
* Remove direct payment because the development time is limit. In the other hand, the application finds nearby store which have user-needed-products to recommend so the distance between end-user and store is usually short. Recommend to use COD payment.
* To support end-user can find nearby store to user’s current location, in case, user have arrived to strange place (location).

### Advantages

* Easy to search (find) products which they need.
* Easy to order products through nearby store to their current location.
* Easy to register store, but this registration will be close censored.
* Convenient to find nearby store address to user’s current location when user have arrived strange place.

### Disadvantages

* To not have directly online payment yet.
* Hard to control spam ordering (in case, after sending ordering product, end-user cancel these ordering).

### Expectation

* To have a platform to connect stores with users
* To make user convenient, happy in buying products.
* To make store easy to advertise, approach to user.

# Software Project Management Plan(SPMP)

## Problem Definition

### Name of this capstone project

* + This capstone project is a system which includes a mobile application and a website. This system has been named “5SAO” which means “5 Super Application of Ordering”
    - Super-Fast
    - Super-Convenient
    - Super-Saving
    - Super Professional
    - Super Friendly

### Project Abstract

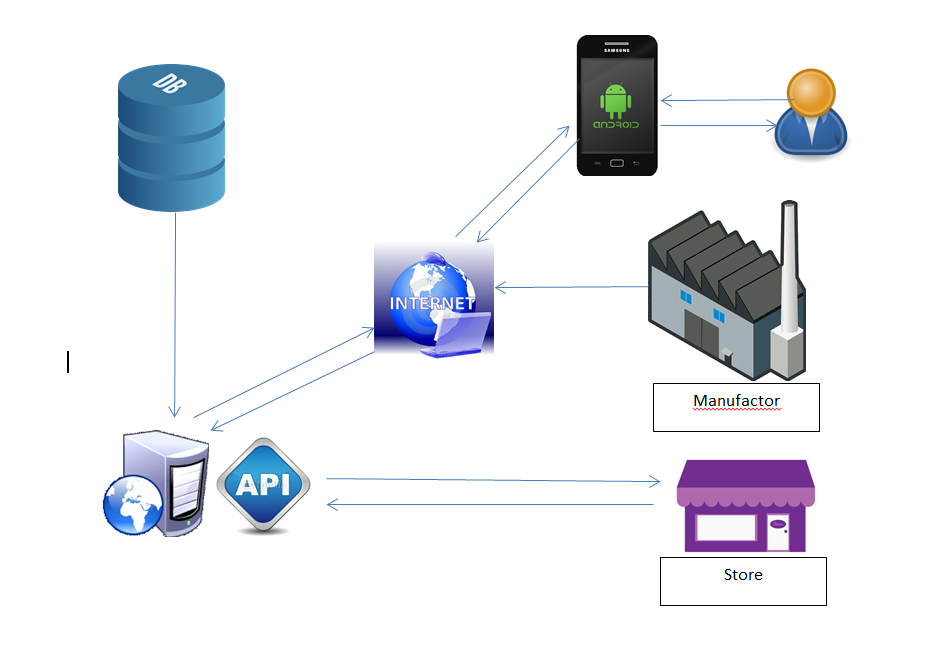
* + Nowadays, e-commerce, specifically, e-shopping application becomes more popular. Everyone can approach, search and ordering products via

e-shopping application. But, we realize that we have a trouble which end-users are hard to approach to nearby stores. They usually search products and order these via system-suggested stories which maybe is so far away from them. This can make deliverable time so long.

* + We create a system via locating user’s current location or chosen location to help users decrease deliverable time. This system is useful for people who had arrived to strange place/location.

### Project Overview

1. The Current System
2. The Proposed System



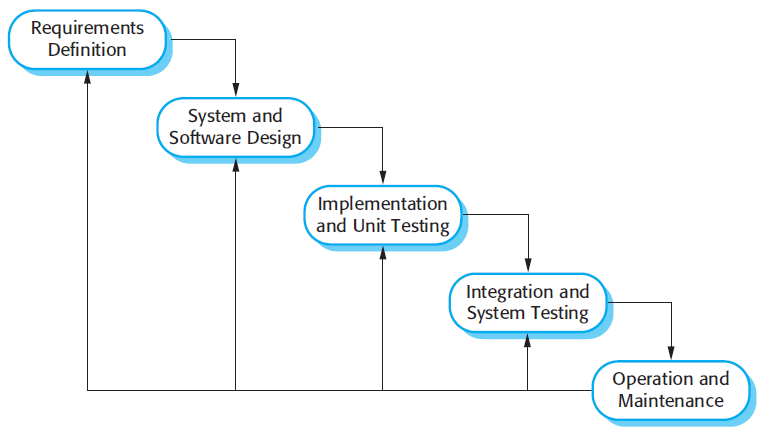
1. Boundaries of the System
2. Development Environment
   * JDK 1.8: The Java Development Kit (JDK) is a software development environment used for developing Java applications and applets. It includes the Java Runtime Environment (JRE), an interpreter/loader (java), a compiler (javac), an archiver (jar), a documentation generator (javadoc) and other tools needed in Java development.
   * NetBeans IDE 8.2: An integrated development environment (IDE) for Java
   * Android SDK (software development kit): A set of development tools used to develop applications for Android platform. The Android SDK includes the following:
     + Required libraries
     + Debugger
     + An emulator
     + Relevant documentation for the Android application program interfaces (APIs)
     + Sample source code
     + Tutorials for the Android OS
   * Android Studio 3.1.2: The official Integrated Development Environment (IDE) for Android app development
   * Server CentOS 7: An operating system for server
   * Tomcat 7.0.76: An open source implementation of the Java Servlet, Java Server Pages, Java Expression Language and Java Web Socket technologies.
   * MySQL: An open-source relational database management system (RDBMS)

## Project organization

### Project Process Model

### Waterfall Model

* + The waterfall model is a sequential approach, where each fundamental activity of a process represented as a separate phase, arranged in linear order.



### Role and Responsibilities

* + Project Team Lead: Nguyễn Quốc Đạt
    - Assigned full or part time to participate in project team activities.
    - Manages specific project plan activities and contributes to project plan development in collaboration with project manager.
    - Coordinates documentation, testing, and training efforts related to project plan.
  + Front-end Leader: Nguyễn Đại Thắng.
    - Divide the front-end work for each member.
  + Back-end Leader: Ngô Ngọc Tuyên.
    - Divide the back-end work for each member.
  + Project Team Member
    - Assigned full or part time to participate in project team activities.
    - Responsible for contributing to overall project objectives and specific team deliverables.
    - Escalates policy issues to team lead for referral to appropriate policy making bodies.
    - This role includes all various resources necessary to execute the project plan.

### Tools and Techniques