1. **Report No. 1 Introduction**
   1. **Project Information**
      * Project name: **Design and implement the model of smart garden**
      * Abbreviation: **DIMOSG**
      * Product Type: **Device**
      * Start Date: **May 9th 2016**
      * End Date: **September 2016**
   2. **Introduction**

Nowadays, farming is absolutely vital for every society. However, land costs too much and farming make too little, its depend on spread of land. Besides that, people don’t have enough time to take care the plant and easy to forget the schedule about gardening. The actual situation is people don’t know when the most convenient time to watering or fertilize the plants, it is easy make the plants to die or waste the resource. This project can help farmer increase productivity even in a small land, reduce the water or fertilizer, helps plants to have a better life.

* 1. **Current Situation**

As you know, we should give a hoot the specification of weather such as temperature, humidity, light and PH degree to find the suitable way to take care each plant. That helps controlling water and fertilize for plants.

* 1. **Problem Definition**

With the current system in the market, we must have paid so much for using the smart garden and it is not suitable for Viet Nam environment. And some kind of control application is hard for Vietnamese people.

* 1. **Proposed Solution**

The proposed solution is a system for searching traveling information collected from various sources, named “EzGo”. This system is not only a searching tool but also an assistant suggesting appropriate information based on other similar users’ behaviors.

EzGo includes a web app and a mobile app, with the following features:

* 1. **Feature functions**
     + Admin/Staff can manage all the data collections and track activites of all the background processes.
     + Background processes:
       - Periodically parse data from external data sources then add new data to main storage or update the existed data if there are any changes.
       - Categorize raw data and update to Lucene database.
       - Remove redundant and out-of-date data from main storage and Lucene database.
     + Users can search for hotels/tours/flights by keywords, locations, date or price. After search results are displayed, users can sort and filter by criterias.
     + By default, search results will be sorted by users’ trends.
     + The system will suggest possible keywords when users start typing. The suggestions are based on the similarity of keyword content and numbers of users searching for it.
     + Whenever users view detail of a search result, the system will display suggestion of relevant hotels, tours, flights based on the content of those data items, users’ location and other users’ activities.
     + User activities will be collected for optimizing search results and suggestions along with search results.
     + Mobile app are developed with all the searching features as the web app.
  2. **Advantages and disadvantages**

Advantages:

* + - Data is periodically collected and updated from differents sources so that users can compare the results and find the most suitable for their needs.
    - Users can search for all the information about hotels, flights or tours without browsing through several websites.
    - Search result can be filtered or sorted by criterias.
    - Users can see suggested information of what other users are interested in or related information to the search result.
    - The search result will be optimized by the time based on users activities.

Disadvantages:

* + - Data will not be real-time updated.
    - The collecting data module must be configured for each websites and can be affected by any changes of the data sources.
  1. **Functional Requirements**

System:

* + - Parse and collect data from data sources on a schedule
    - Periodically update data from main storage to Lucene
    - Periodically categorize parsed data
    - Optimize search results and recommendations for users
    - Provide API for mobile app Admin:
    - Manage data sources
    - Manage schedulers
    - Configure data parsing
    - Manage parsed data User:
    - Search for hotels, flights, tours by location, date or price
    - Filter and sort search results
    - See suggestions of trending or related information
    - Use all the functions in web app and mobile app
  1. **Role and Responsibility**

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| --- | --- | --- | --- | --- |
| **No** | **Full Name** | **Role** | **Position** | **Contact** |
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***Table 1 : Roles and Responsibilities***