

**Project LYF**

Project Documentation to be submitted

to the Faculty of School of

Computing and Information Technology

under Asia Pacific College

In partial fulfillment of the Requirements for the Subject

Structure Systems Analysis and Design (SYSADD1)

By:

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**Executive Summary**

Philippine Institute of Traditional and Alternative Health Care (PITAHC) is a government institution created under the Department of Health. Its vision is described as “People’s health through traditional and alternative health care” which affirms its desire to inject traditional and alternative medicines to the conventional health care system in the country. PITAHC aims to promote and advocate the use of traditional, alternative, preventive, and curative health care modalities that have been proven safe, effective, cost effective and consistent with government standards on medical practice.

According to an interview with a PITAHC researcher, the main hindrance to achieve PITAHC’s goal is the lack of awareness and knowledge regarding the results of Department of Health's researches on Traditional Medicine. Also, it is difficult for the Institute to advocate the use of medicinal plants because most Filipinos find it hard to recognize plants that are officially identified by the botanists of the Bureau of Plant Industry through mere observation of its physical characteristics.

Project LYF aims to support PITAHC in its mandated function by providing results of their researches, which include traditional medicines and their clinically approved usage to users. Moreover, the project includes image recognition that could help users identify medicinal plant through image capture of its leaf at various angles, lighting and its varieties and shares its location to other users upon recognition

**I. Introduction**

**Project Context**

The government created Philippine Institute of Traditional and Alternative Health Care as mandated by the Republic Act 8423 “to improve the quality and delivery of health care services to the Filipino people through the development of traditional and alternative health care and its integration into the national health care delivery system”. Philippine Institute of Traditional and Alternative Health Care, or PITAHC, is working under the Department of Health towards this mandated goal. PITAHC envisions itself to lead research, development, promotion and development of standards on traditional and complementary medicines to ensure its accessibility, availability, sustainability and integration into the national health care system.

The project members have interviewed Ms. Ma. Teresa M. Torres, a Science Research Specialist II for PITAHC. According to her, the greatest hindrance towards their goal is the lack of awareness and knowledge regarding traditional and complementary medicine. It is also difficult for PITAHC to advocate use of medicinal plants because some Filipinos can’t recognize them. During the interview, Ms. Torres has explained various physical characteristics of the plants that the general public more often misidentify or how some of these beneficial plants are treated like weeds despite its medicinal benefits. In addition, PITAHC has performed numerous studies proving their effectivity and safety but this information hasn’t reached the general public.

These problems cripple the operation of PITAHC. The team addresses these problems in support of PITAHC towards their mandated function through Lyf.

**Purpose and Description**

Philippine Institute of Traditional and Alternative Healthcare, or PITAHC, is facing problems on regarding their advocacy and promotion of traditional and contemporary medicine. Their researches, which includes clinic studies and test, has been difficult to disseminate and they are afraid this cause skepticism towards traditional and contemporary medicine.

To address these, the team developed Lyf. Lyf is a system that includes an Android application for users and website for the admin. The android application allows users to register and login. Once account has been created, the user can now access the application’s functions. These includes image recognition trained on the Department of Health’s recommended medicinal plants. The feature helps users to identify plants and explore their medicinal benefits. Users will have to take a photo of its leaf for the system to recognize.

Ms. Ma. Teresa M. Torres, a Science Research Specialist II for PITAHC, has provided the team with the results of their studies to include in the system. Once identified by the app, the location is shared among all users which can be seen through map. Using this function, users can view all shared plant location, or filter the results through plant search. Upon viewing a certain plant location, the user can also view that plant’s details.

The app also contains a plant glossary which users can browse through to access all plant details derived from the studies.

The system’s website allows admin to respond to reports such as mismatch, and mislocation. The admin can also view all results of image recognition. Most importantly, if new studies and information has to be added to the system, the admin can do so using the website. These changes are visible to the users through the android app.

**II. Scope and Limitations**

**III. Review of Related Literature/Systems**

**IV. Theoretical Background**

**V. Appendices**

**Gap Analysis**

|  |  |  |
| --- | --- | --- |
| User Req. | Current | Proposed |
| Information Dissemination | Information is currently just being posted on their website | Aside from the web, info can now be viewed, accessed via mobile app |
| Information sharing is quite a bit toxic | Schedule individual Meetings first before info can be shared | Submitted request can be done in the app and easily disseminated and approved |
| Identify plant easily | Physically, you need to bring the specimen for verification | Image Recognition of the specimen can save time and effort |
| Plant survey information gathered easily | Individual checking per area regarding the plants | One Image recognition is verified, location can be determined easily |

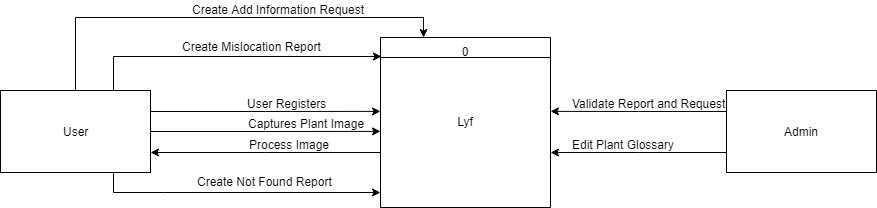
**Event Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Event** | **Trigger** | **Source** | **Use Case** | **Response** | **Destination** |
| A registration form will be shown if the user hasn’t created an account for the app yet (or wants to create a new account for the app) | User registration | User | User Registers | Display Register form | User/System |
| User has photographed a plant for identification | User wants to identify a certain plant | User | Captures Plant Image | System prepares image for identification | System |
| System compares image with training data set | System receives photo | System | Process Image | System displays identified plant match | User |
| System creates report if plant match is not found | Plant cannot be identified by system | System | Create Not Found report | System generates Plant Not Found report | User/System |
| User reports incorrect/missing location | Report from user | User | Create Mislocation report | System generates Mislocation report | User/System |
| User wants to add or edit plant information in the plant glossary | User adds/edits plant information in the plant glossary | User | Create Add/Edit Plant Information Request | System generates Add/Edit Plant Information Request for the admin | Admin/System |
| Admin responds to requests and reports | Requests and reports from user | Admin | Validate Report and Request | Admin validates reports and requests | User/System |
| Admin updates plant glossary | Admin updates plant details in the system | Admin | Update Plant Glossary | System updates plant glossary | System |
| System generates reports | Admin requests for System Reports | Admin | Generate System Reports | System displays reports | Admin/System |

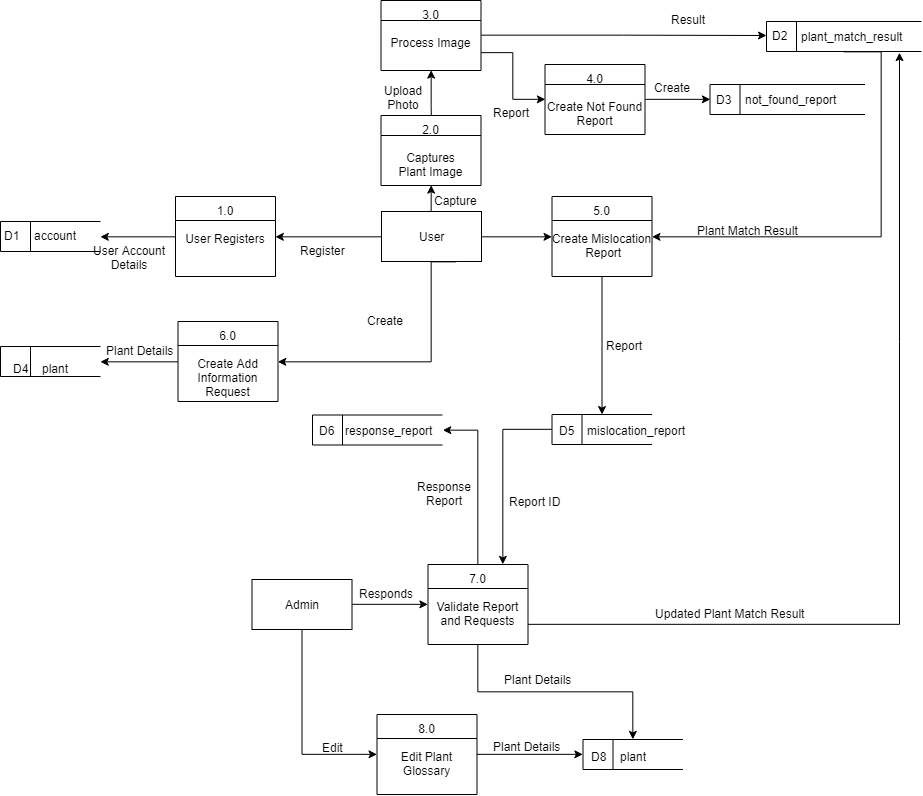
# **Use Case Diagram**

**Use Case Full Description**

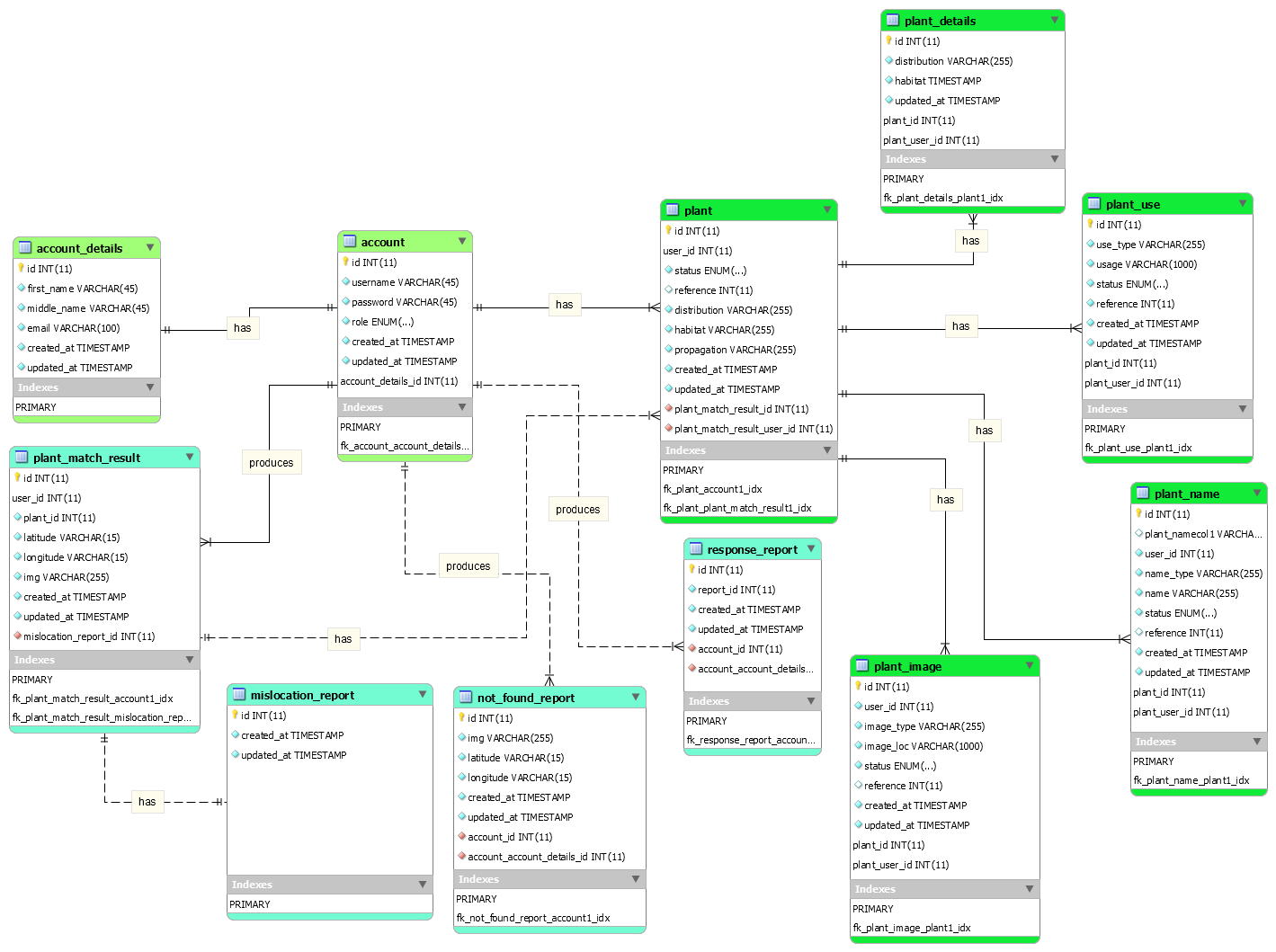
**Context Diagram**

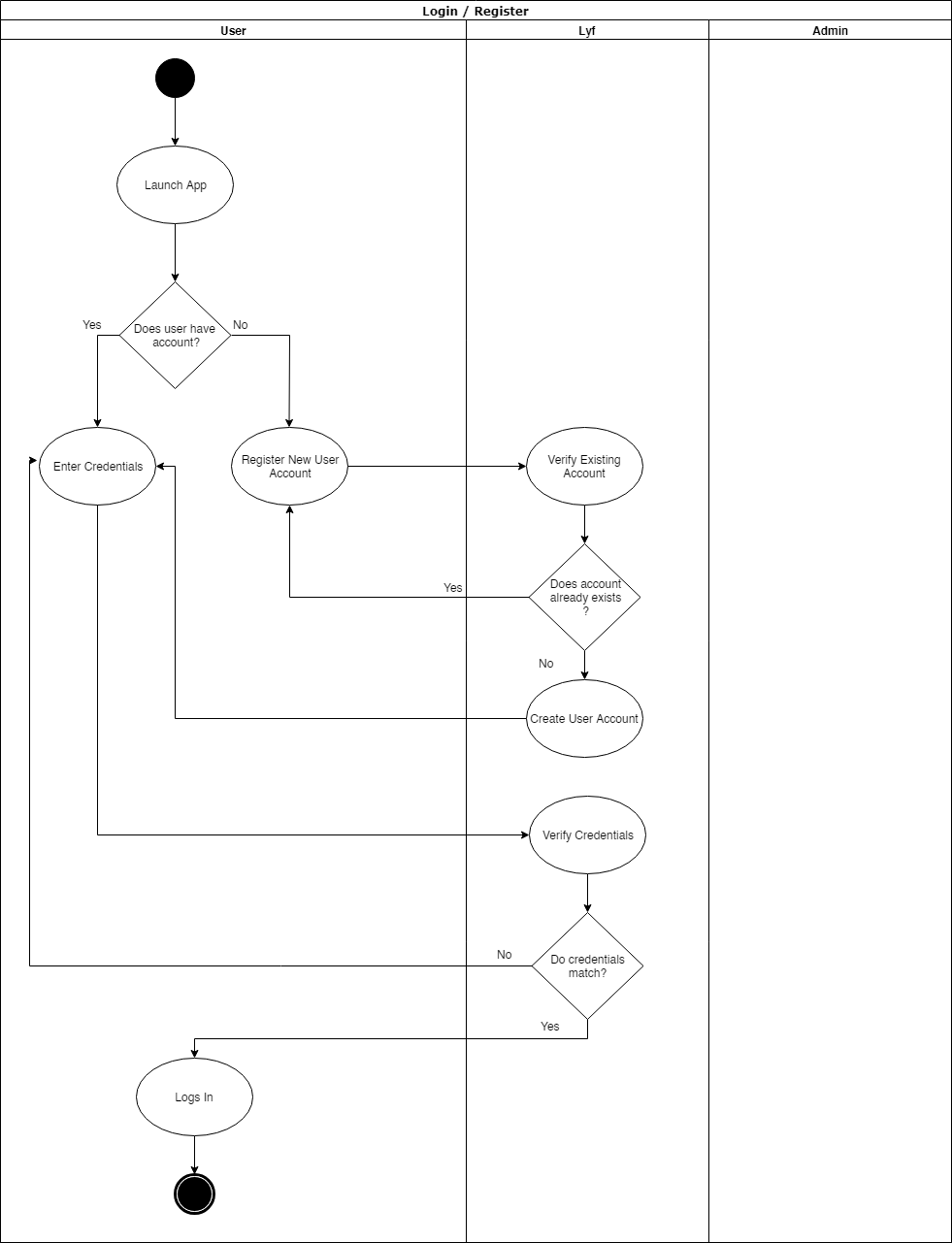
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# **Data Flow Diagram – Data Flow Diagram (Level 0)**

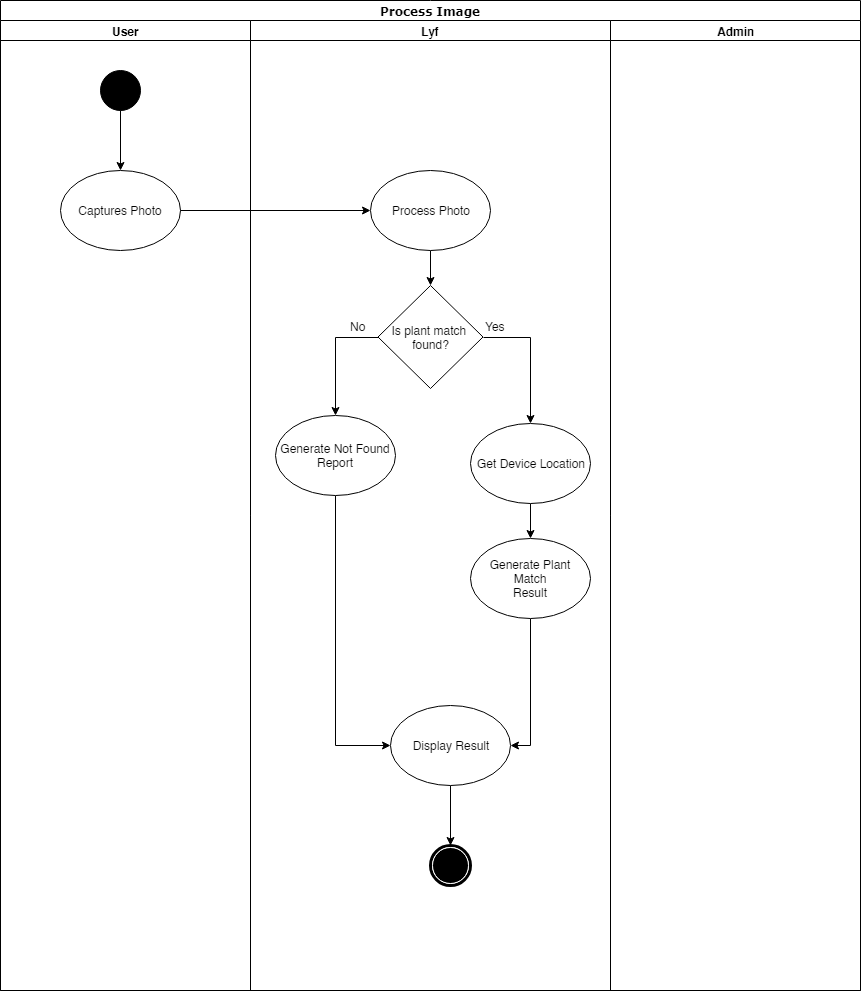
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# **Entity Relationship Diagram**

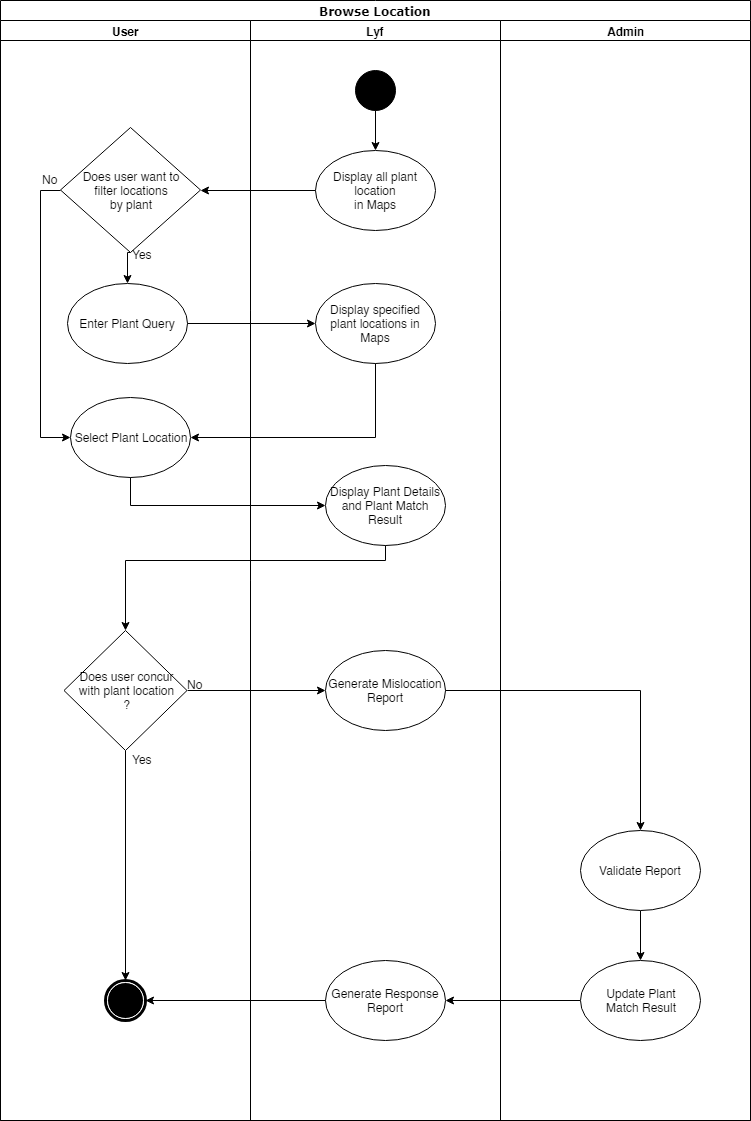


**Activity Diagram – Activity Diagram (Login)**

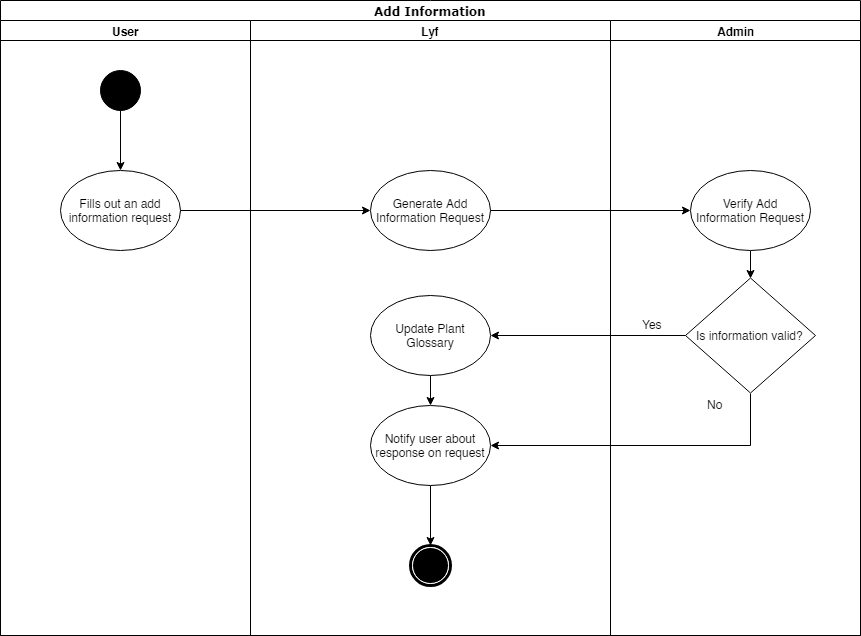
# **Activity Diagram (Process Image)**

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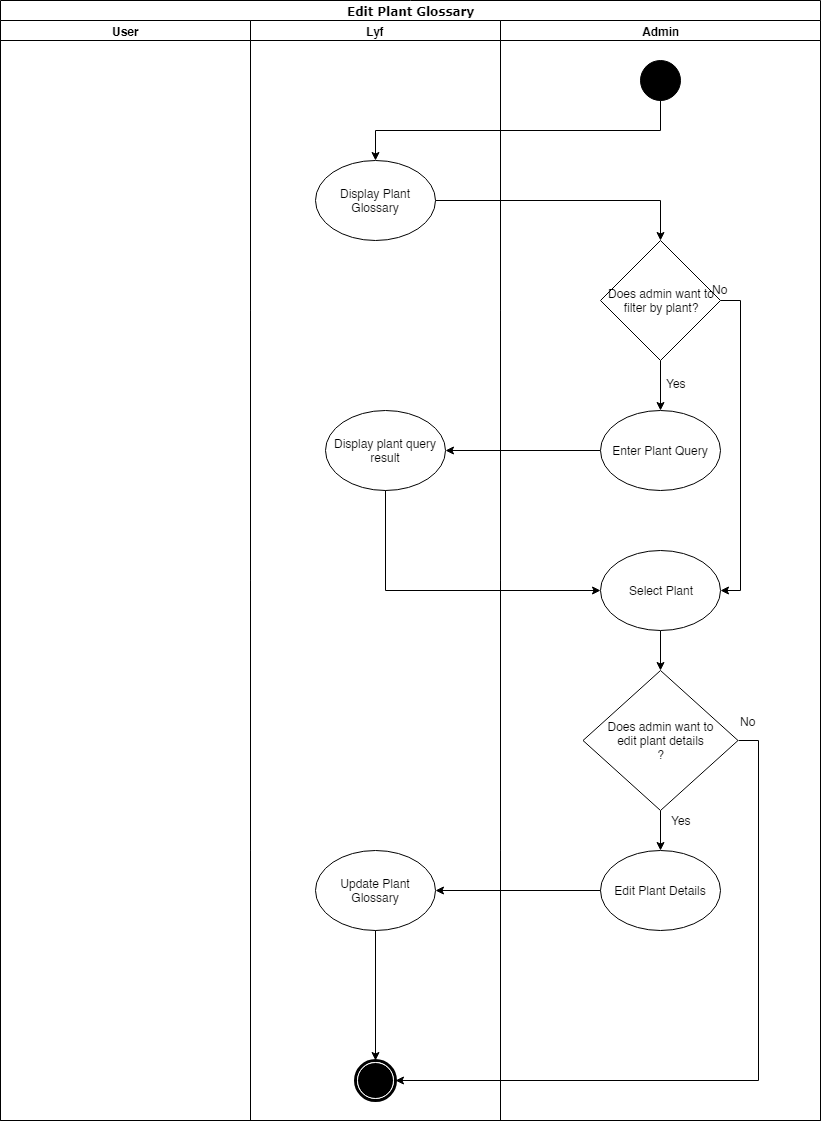
# **Activity Diagram (Browse Location)**

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# **Activity Diagram (Add Information)**

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# **Activity Diagram (Edit Plant Glossary)**

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# **Sequence Diagram**

# **Class Diagram**