Deliverable #2 Template

SE 3A04: Software Design II – Large System Design

1 Introduction

This section should provide an brief overview of the entire document.

1.1 Purpose

a) Delineate the purpose of the document

b) Specify the intended audience for the document

1.2 System Description

a) Give a brief description of the system. This could be a paragraph or two to give some context to this document.

1.3 Overview

a) Describe what the rest of the document contains

b) Explain how the document is organised

2 Use Case Diagram

1. User wishes to access the app. The user shall be able to download the app onto their smart phone in order to access it. This downloading action will be handled by the operating system. User shall be able to open the app. The system developer needs to ensure that application shall be able to handle user input, so that the user can access and interact with the app.

2. User wishes to take a picture and post it to social media. User can then access the built-in camera on phone and it's functionality from the app. User can also save the picture to the app and the phone if they so desire. User shall be able to post to social media directly from the app. The system developer shall ensure that application can access the internet via wireless connection from smart phone, the built-in camera on the smart phone, and social media (Instagram). Application shall be able to save pictures directly to the phone.

3. User wishes to view and modify pictures from the app. User shall be able to view saved pictures through the app and the phone. User shall be able delete pictures from the app and the phone. System Developer shall ensure that application can display requested pictures to the user. Application shall be able to delete pictures directly on the phone.

4. User wishes to identify a natural phenomena. User shall be able to post a picture on social media through the app. The system developer shall ensure that the app can access the user's location using google maps services. App shall have access to the internet via wireless connection from smart phone. App shall be able to switch "expert" modules in order to identify the natural phenomenon.

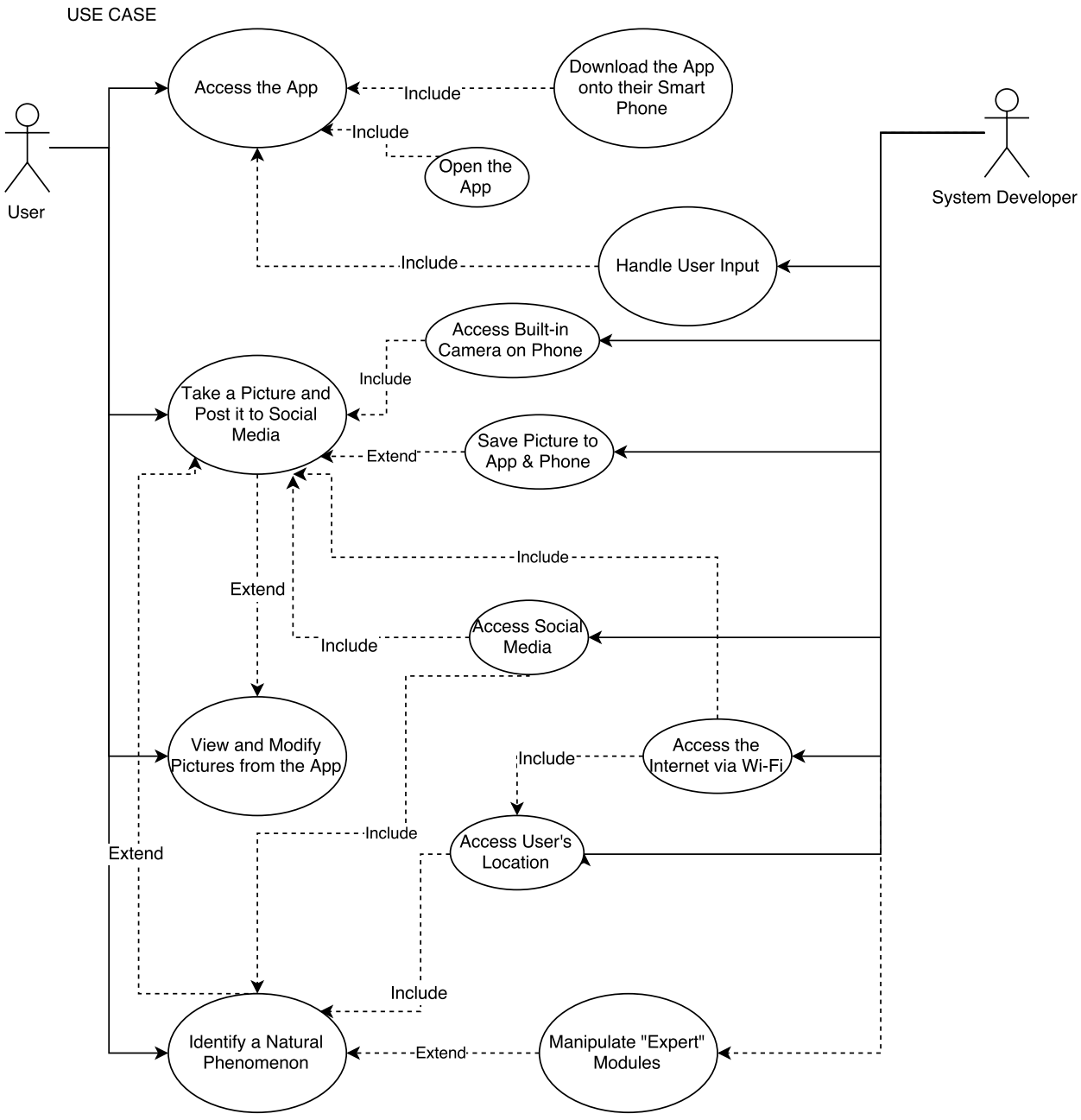

Figure 1: Use Case Diagram

3 Analysis Class Diagram

This section should provide an analysis class diagram for your application.

4 Architectural Design

This section should provide an overview of the overall architectural design of your application. You overall architecture should show the division of the system into subsystems with high cohesion and low coupling.

4.1 System Architecture

a) Identify and explain the overall architecture of your system

b) Be sure to clearly state the name of the architecture

c) Provide the reasoning and justification of the choice

d) Provide a structural architecture diagram showing the relationship among the subsystems (if appropriate)

4.2 Subsystems

a) Provide a brief description of each subsystem. Be sure to document its purpose and relationship to other subsystems.

5 Class Responsibility Collaboration (CRC) Cards

This section should contain all of your CRC cards.

Class Name: Database	
Responsibility:	**Collaborators:**
Has information on all the phenomenons and each of their attributes.	

A Division of Labour

Include a Division of Labour sheet which indicates the contributions of each team member. This sheet must be signed by all team members.

Class Name: Expert1:Physicist	
Responsibility:	**Collaborators:**
For attributes shape, colour, opacity, size, angle, elevation and brightness it will compare the attribute specifications given by the user to the phenomenons in the database and create a list of phenomenons that match the user input.	Database, Controller

Class Name: Expert2:FieldExpert	
Responsibility:	**Collaborators:**
For attributes temperature, density and moistness it will compare the attribute specifications given by the user to the phenomenons in the database and create a list of phenomenons that match the user input.	

IMPORTANT NOTES

- Please document any non-standard notations that you may have used
  - *Rule of Thumb*: if you feel there is any doubt surrounding the meaning of your notations, document them
- Some diagrams may be difficult to fit into one page
  - It is OK if the text is small but please ensure that it is readable when printed
  - If you need to break a diagram onto multiple pages, please adopt a system of doing so and thoroughly explain how it can be reconnected from one page to the next; if you are unsure about this, please ask about it
- Please submit the latest version of Deliverable 1 with Deliverable 2
  - It does not have to be a freshly printed version; the latest marked version is OK
- If you do NOT have a Division of Labour sheet, your deliverable will NOT be marked

Class Name: Expert3:Meterologist	
Responsibility:	**Collaborators:**
For attributes sun, temperature and precipitation it will compare the attribute specifications given by the user to the phenomenons in the database and create a list of phenomenons that match the user input.	

Class Name: Controller	
Responsibility:	**Collaborators:**
Gives experts access to the database, and determines common phenomenons amongst the lists of the three experts and returns phenomenons to the user.	Expert1, Expert2, Expert3, GoogleAPI, Database

Class Name: GoogleAPI	
Responsibility:	**Collaborators:**
Determines users location to create list of phenomenons that could occur in the area that the user is in by comparing the location information to the location attribute in the database of phenomenons.	Database, Controller