**BSHC4 – Cloud Computing**

**Cloud Application Development Project**

**Patient Management System**

**Adam Kearney**

**X13748659**

# Introduction

The purpose of this project was to create a SHC-PMS (Smart Health Care - Patient Management System) using a suitable platform as a service technology, for this project I used Ruby on Rails. The PMS I have created allows users to record patient information which is organized into separate clinics, the application allows for users to create patient requests which are to be used if a patient needs further consultation.

# Development Strategy

## Database Design

This application has three main database tables:

* Patient Table is used to store all generic information about the patient such as their name, date of birth and contact details, each patient also has a user id associated with it to keep track of which user added the patient to the system to ensure only that user can delete or edit the patient’s details. A patient belongs to a user and has many requests.
* Clinic Table is used to store each clinic available to the system, the patient table also has a clinic id associated to it to keep track of which clinic that patient is assigned to. A clinic has many patients.
* Request Table is used to keep track of all the request made for each patient. A request belongs to a patient.

Patient table rails command: (*rails generate model Patient name:string dob:date address:text phone:integer infrection:string injury:string observation:string*)

Clinic table rails command: *(rails generate model Clinic name:string)*

Request rails command: (*rails generate model Request hospital:string department:string comment:string appointment:date)*

## Implementation

In this section describe *concisely* the functionalities of your application, and, for each functionality list the name of the files (*just the file names and not their content!*) which contain the code/implementation of that functionality.

*For example:*

*Functionality: Book a tour – Allows an user to make a request to book a tour*

*The book a tour request is implemented using an MVC approach. The functionality is implemented in the following files:*

*The book a tour request is implemented using an MVC approach. The functionality is implemented in the following files:*

* *Model: here list the name of the .rb file/files of your model/models used to implement this functionality (e.g. modelfilename1.rb)*
* *View: here list the name of the view/views (i.e. .html.erb files) used to implement this functionality (e.g. viewnamefilename.html.erb)*
* *Controller: here list the name of the controler (i.e. .rb file) used to implement this functionality (e.g. controllername\_controller.rb)*

Remark: If any of the views present some advanced methods to visualize/display the data (such as charts) do mention that when you list the name of the views.

## Design Patterns

This section should present all the patterns you implemented in your application, and the functionality provided by those patterns. In addition, you should list the name of the files which contain the implemented pattern and where the pattern is used.

*Example: Decorator Pattern is implemented to allow a user to book a tour and select the optional extras they want the tour to come with. The pattern for this functionality is implemented in the file tour\_decorator.rb (located in the folder lib) and is used in the file tours\_controller.rb.*

# Deployment

In this section specify the Cloud Platform as a Service where you deployed your application. Also please ***provide the URL of your application*** deployed to that Cloud Platform as a Service. In addition, please include the username and password of one of the users of your application. This must be provided, in particular, if you have an admin user in your application.

Furthermore, specify the name of the database service your deployed project is using.

*For example, your application deployed to a Cloud Platform as a Service could use the Heroku Postgres database.*