**CRC Model**

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| **Patient** | |
| ● Name  ● Date of Birth  ● Health card number  ● Show visit record  (Visit dates, times and vital signs)  ● Show doctor record  (Date and time seen by doctor)  ● Show prescription  ● View urgency level |  |

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| **User** | |
| ● Launch and login the application  ● View data of all patients  ● View a patient’s record with his/her health card number  ● Access to all the saved accounts  ● Identify itself whether it’s a Nurse or Physician | Patient |

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| **Nurse (superclass: User)** | |
| ● Record new Patient’s record  ● Record new visit record of a Patient  (includes vital signs)  ● Record the date and time when a patient has been seen by a doctor  ● Save all collected data  ● View the categorized list of patients | Patient |

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| **Physician (superclass: User)** | |
| ● Record prescription information  ● Save all collected data | Patient |

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| **LoginActivity (superclass: Activity)** | |
| ● Check user’s account input  ● Login for users  ● Create the Nurse or Physician object accordingly. | User  Nurse \ Physician  Patient  MainActivity |

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| **MainActivity (superclass: Activity)** | |
| ● Search for a particular patient  ● Open the list-view of all patients  ● Open the view for adding new patient’s record  ● Logoff for the user | User  Nurse \ Physician  Patient  PatientList  NewPatientRecord  PatientProfile |

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| **PatientProfile (superclass: Activity)** | |
| ● Show a patient’s personal info  ● Open the view of a visit record  ● Open the view for adding new visit’s record  ● Open the view for adding new doctor’s record  ● Open the view of prescription | User  Nurse \ Physician  Patient  VisitRecord  NewVisitRecord  NewDoctorRecord  PrescriptionData |

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| **PatientList** **(superclass: Activity)** | |
| ● Show the list of all patients  ● Show the categorized list of patients if User is Nurse  ● Open the view of a patient’s profile | User  Nurse  Patient  PatientProfile |

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| **PrescriptionData (superclass: Activity)** | |
| ● Show the current prescription of a patient (medication & instruction)  ● Open the view for updating prescription if User is Physician | User  Physician  Patient  NewPrescription |

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| **VisitRecord (superclass: Activity)** | |
| ● Show a detailed visit record of a patient | Patient |

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| **DoctorActivity (superclass: Activity)** | |
| ● Save a new doctor record for a patient  ● Open the view for updating prescription if User is Physician | User  Nurse \ Physician  Patient  NewPrescription |

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| **NewPrescription (superclass: Activity)** | |
| ● Update prescription for a patient | Physician  Patient |

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| **NewPatientRecord (superclass: Activity)** | |
| ● Save a new patient’s record | Nurse  Patient |

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| **NewVisitRecord (superclass: Activity)** | |
| ● Save a new visit record for a patient | Nurse  Patient |

**Design Description**

Data storage:

We use text files to store all the data involved in the application. All the data is separated into four text files. They are doctor\_records.txt (for storing doctor records of all patients), visit\_records.txt (for storing visit records of all patients), patient\_records.txt (for storing personal information of all patients), and prescriptions.txt (for storing available prescription for all patients). File formats for these files are quite similar. All of the files use health card number to identify the individual record from all other patients’ record. We decided to use this storage system and file format because they are straightforward and easy to manipulate.

Models:

Patient, User, Nurse and Physician are the internal classes that control the data flow in the application. Patient class allows access to all the information (including personal data, visit records, doctor records, and prescription) of a particular patient in the application. User represents the general user of the application. It’s the parent class for Nurse and Physician. More and different functionalities are built in Nurse and Physician class according to the requirements. For example, Physician can update and save prescription while Nurse can record and save a new patient’s data.

Activities:

LoginActivity is the launching activity of our application. User must enter the application through this activity by providing its account information. Once registered, this user’s account type would be recognized and fixed throughout that session of the application. MainActivity is the main menu of this application. It directs user to view a particular patient’s information, or view a list of all patients, or create a new patient’s record. PatientProfile, PatientList, VisitRecord, and PrescriptionData are informative activities, which show the requested data. The rest of activities are for user to record information and save into the system.