1. See Page-1 in diagrams.net XML file.

2. \***Assuming that the appointments can be displayed on a screen with some sort of a UI. \***

Book Appointment Use Case Description

|  |  |
| --- | --- |
| **Use Case Name** | Book Appointment |
| **Brief Description** | Patient calls to make an appointment. Receptionist needs to book it in the CoVax System. |
| **Primary Actor** | Receptionist |
| **Secondary Actor (if any)** | N/A |
| **Precondition** | The booking is not currently in the system. |
| **Dependency** | INCLUDE USE CASE Display Appointment |
| **Generalization** | N/A |
| **Basic Flow** | **Steps:** 1. A receptionist performs the Display Appointment use case.  2. The receptionist enters the patient information including the date and time of the appointment.  3. System saves the information and displays the new appointment. |
| **Postcondition:** New appointment in the system |
| **Specific Alternative Flow** | No appointment slots available. |
| RFS: Basic Flow 1. |
| **Steps:**  1. ABORT |
| **Postcondition:** No new appointment in the system |
| **Global Alternative Flows** | N/A |
| **Bounded Alternative Flows** | N/A |
| **Special Requirements** | * 1. System shall be updated immediately at all clinics after an appointment is booked so that staff is working with the most up to date information.   2. System will only take one appointment booking request at a time so appointments don’t overlap.   3. The number of available booking slots will reflect the actual number of slots that have not been booked.   4. Appointments can be made only within operating hours of clinic. |

Cancel Appointment Use Case Description

|  |  |
| --- | --- |
| **Use Case Name** | Cancel Appointment |
| **Brief Description** | Patient calls to make cancel an existing appointment. Receptionist removes the appointment from the CoVax System. |
| **Primary Actor** | Receptionist |
| **Secondary Actor (if any)** | N/A |
| **Precondition** | The booking is currently in the system. |
| **Dependency** | INCLUDE USE CASE Display Appointment |
| **Generalization** | N/A |
| **Basic Flow** | **Steps:** 1. A receptionist performs the Display Appointment use case.  2. The receptionist selects the appointment to be cancelled.  3. The receptionist deletes the appointment.  4. System asks receptionist to confirm the cancellation.  5.Receptionst confirms the cancellation. |
| **Postcondition:** Appointment removed from the system |
| **Specific Alternative Flow** | Receptionist declines confirmation for cancellation. |
| RFS: Basic Flow 5. |
| **Steps:**  1. ABORT |
| **Postcondition:** Apportionment is not removed form the system. |
| **Global Alternative Flows** | N/A |
| **Bounded Alternative Flows** | N/A |
| **Special Requirements** | 2.1 The system shall update the cancelation immediately so that all staff working with the system will get the latest information. |

Change Appointment Use Case Description

|  |  |
| --- | --- |
| **Use Case Name** | Change Appointment |
| **Brief Description** | Patient calls to modify existing appointment. Receptionist records changes to the appointment. |
| **Primary Actor** | Receptionist |
| **Secondary Actor (if any)** | N/A |
| **Precondition** | The booking is currently in the system. |
| **Dependency** | INCLUDE USE CASE Display Appointment |
| **Generalization** | N/A |
| **Basic Flow** | **Steps:** 1. A receptionist performs the Display Appointment use case.  2. Receptionist makes changes to the appointment.  3. System saves and updates the information. |
| **Postcondition:** Changes to apportionment are updated in system. |
| **Specific Alternative Flow** | N/A |
| **Global Alternative Flows** | N/A |
| **Bounded Alternative Flows** | N/A |
| **Special Requirements** | 3.1 The system shall be updated immediately following the changes so that the staff that are working with the system will get the latest information. |

Display Appointment Use Case Description

|  |  |
| --- | --- |
| **Use Case Name** | Display Appointment |
| **Brief Description** | System can display the appointments to the receptionist. |
| **Primary Actor** | Receptionist |
| **Secondary Actor (if any)** | N/A |
| **Precondition** | TRUE |
| **Dependency** | N/A |
| **Generalization** | N/A |
| **Basic Flow** | **Steps:** 1. A receptionist enters a date or patient information to get appointments.  2. System displays appointments. |
| **Postcondition:** Respective apportionment is displayed. |
| **Specific Alternative Flow** | N/A |
| **Global Alternative Flows** | N/A |
| **Bounded Alternative Flows** | N/A |
| **Special Requirements** | 4.1 Appointments should be able to be sorted via dates or patients |

Generate Patient Report Use Case Description

|  |  |
| --- | --- |
| **Use Case Name** | Generate Patient Report |
| **Brief Description** | The system creates a report containing all information on a specific patient for the user to download. |
| **Primary Actor** | Administrative Staff |
| **Secondary Actor (if any)** | N/A |
| **Precondition** | The patient has records in the system. |
| **Dependency** | N/A |
| **Generalization** | N/A |
| **Basic Flow** | **Steps:**  1. Receptionist selects a specific patient.  2. System complies patient data and exports it. |
| **Postcondition:** Patient report is ready to be downloaded by Administrative Staff. |
| **Specific Alternative Flow** | N/A |
| **Global Alternative Flows** | N/A |
| **Bounded Alternative Flows** | N/A |
| **Special Requirements** | 5.1 The report should include all patient personal information recorded and medical history as well. |

Generate Management Report Use Case Description

|  |  |
| --- | --- |
| **Use Case Name** | Generate Management Report |
| **Brief Description** | The system creates a report containing an overview or the clinic activities and vaccine supply/demand. |
| **Primary Actor** | Administrative Staff |
| **Secondary Actor (if any)** | N/A |
| **Precondition** | TRUE |
| **Dependency** | N/A |
| **Generalization** | N/A |
| **Basic Flow** | **Steps:**  1. Receptionist selects create management report.  2. System complies clinic data and exports it. |
| **Postcondition:** Management report is ready to be downloaded by Administrative Staff. |
| **Specific Alternative Flow** | N/A |
| **Global Alternative Flows** | N/A |
| **Bounded Alternative Flows** | N/A |
| **Special Requirements** | 6.1 The report should include all clinic data including conditions, vaccine supply and demand. |

Record Patient Data Use Case Description

|  |  |
| --- | --- |
| **Use Case Name** | Record Patient Data |
| **Brief Description** | Clinical Staff need to add some medical information to a patient record. |
| **Primary Actor** | Clinical Staff |
| **Secondary Actor (if any)** | N/A |
| **Precondition** | TRUE |
| **Dependency** | N/A |
| **Generalization** | N/A |
| **Basic Flow** | **Steps:** 1. A clinical staff member selects a patient from the system or creates a new record.  2. Clinical staff member inputs/updates patient medical information.  3. System asks to confirm changes to patient record.  4. Clinical Staff member confirms changes. |
| **Postcondition:** New patient data is recorded in the system |
| **Specific Alternative Flow** | Clinical Staff member declines confirmation for changes. |
| RFS: Basic Flow 4. |
| **Steps:**  1. ABORT |
| **Postcondition:** Patient record is not changed or created. |
| **Global Alternative Flows** | N/A |
| **Bounded Alternative Flows** | N/A |
| **Special Requirements** | * 1. System shall be update patient information immediately at all clinics after changes are made so that staff is working with the most up to date information. |

Retrieve Patient Data Use Case Description

|  |  |
| --- | --- |
| **Use Case Name** | Retrieve Patient Data |
| **Brief Description** | Staff need to retrieve patient data to view medical or personal information. |
| **Primary Actor** | Clinical Staff |
| **Secondary Actor (if any)** | Medical Records Staff |
| **Precondition** | Patient record must exist in system. |
| **Dependency** | N/A |
| **Generalization** | N/A |
| **Basic Flow** | **Steps:** 1. A staff member selects a patient from the system.  2. System compiles all patient information and displays it. |
| **Postcondition:** Patient record is displayed for staff to view. |
| **Specific Alternative Flow** | N/A |
| **Global Alternative Flows** | N/A |
| **Bounded Alternative Flows** | N/A |
| **Special Requirements** | * 1. Patient information can only be accessed by authorized staff. |

Maintain Records Use Case Description

|  |  |
| --- | --- |
| **Use Case Name** | Maintain Records |
| **Brief Description** | Medical Records Staff need to continuously maintain the records system so that information is always up to date and the system does not break down. |
| **Primary Actor** | Medical Records Staff |
| **Secondary Actor (if any)** | N/A |
| **Precondition** | TRUE |
| **Dependency** | N/A |
| **Generalization** | N/A |
| **Basic Flow** | **Steps:** 1. A Medical Records staff member monitors the system. |
| **Postcondition:** System is functioning as it should |
| **Specific Alternative Flow** | Error occurs in system. |
| RFS: Basic Flow 1. |
| **Steps:**  1. Alert all clinics. |
| **Postcondition:** System is temporarily suspended from use. |
| **Global Alternative Flows** | N/A |
| **Bounded Alternative Flows** | N/A |
| **Special Requirements** | * 1. Message needs to be sent out to all clinics with information about the error regarding the system. |

3.

|  |  |
| --- | --- |
| **Nouns** | **Representation** |
| Clinical Staff | Actor – not an object |
| Medical Records Staff | Actor – not an object |
| Receptionists | Actor – not an object |
| Administrative Staff | Actor – not an object |
| Appointment | Entity object |
| Patient | Entity object |
| Patient Information | Attribute of Patient Entity – not an object |
| Appointment Information | Attribute of Appointment Entity – not an object |
| Vaccine | Entity object |
| Record | Entity object |
| Records System | Boundary object |
| Cancellation | Type of appointment – not an object |
| Display | Boundary object |

|  |  |
| --- | --- |
| **Verbs** | **Representation** |
| Delete | Associates control object with Appointment and Record entity and Display boundary |
| Confirm | Associates control object with Appointment and Record entity and Display boundary |
| Update | Associates control object with Appointment and Record entity and Display boundary |
| Selects | Associates control object with Appointment and Record entity and Display boundary |
| Saves | N/A |
| Exports | Associates with Record entity and Records System boundary |
| Inputs | Associates with Record entity and Records System boundary |
| Views | Associates control object with Appointment and Record entity and Display boundary |
| Alerts | N/A |
| Displays | Associates control object and Display boundary |

4. See Page-2 in diagrams.net XML file.

5. See Page-3 in diagrams.net XML file.