

## Vaccination Schedule System

Design and implement a system for Patients to maintain vaccination schedule. It will be used by a user to add a patient, add vaccination given details and view vaccination card for them.

- The home page contains the following links
  - Add a patient.
  - Administer Vaccinations

## System Features

Use Case #1	Add a patient																												
Trigger	User clicks on “Add a patient” link on the home page																												
Pre-Conditions	-																												
Post-Conditions	The complete information about the patient is stored in the application database																												
UI Screen Details	The input form contains the following fields <table border="1"> <tr> <td>Name of the patient</td><td>Text value</td><td></td></tr> <tr> <td>DOB (DD-MMM-YYYY)</td><td>Date Value</td><td>Preferably use datepicker control</td></tr> <tr> <td>Gender</td><td>Drop down</td><td>Values Male, Female</td></tr> <tr> <td>Place of Birth</td><td>Text Value</td><td></td></tr> <tr> <td>Blood Group</td><td>Drop down</td><td>Values O+, O-, A+, A-, B+, B-, AB+, AB-</td></tr> <tr> <td>Height</td><td>Decimal (Positive)</td><td></td></tr> <tr> <td>Weight</td><td>Decimal (Positive)</td><td></td></tr> <tr> <td>Save</td><td>Button</td><td></td></tr> <tr> <td>Cancel</td><td>Button</td><td></td></tr> </table>		Name of the patient	Text value		DOB (DD-MMM-YYYY)	Date Value	Preferably use datepicker control	Gender	Drop down	Values Male, Female	Place of Birth	Text Value		Blood Group	Drop down	Values O+, O-, A+, A-, B+, B-, AB+, AB-	Height	Decimal (Positive)		Weight	Decimal (Positive)		Save	Button		Cancel	Button	
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Main Flow	The user provides the required details in the form and Clicks “Save” button. On successfully saving the patient’s details, user is forwarded to the home page along with the message “Patient’s details have been saved successfully”																												
Data Validations	<ul style="list-style-type: none"> <li>Input data has to be validated for numeric and date data fields.</li> <li>Following fields are mandatory – Name and DOB</li> </ul>																												
Business Rules	<ul style="list-style-type: none"> <li>Name of the patient should be unique</li> </ul>																												
Exception Flows	<ul style="list-style-type: none"> <li>In case of any failure in Data Validation or Business Rules, user should be brought back to the screen along with the error message “The value provided for the field ... Is incorrect or incomplete”</li> </ul>																												
Alternate Flows	<ul style="list-style-type: none"> <li>When the user selects “Cancel” button, s/he should be taken back to the home page</li> </ul>																												

Use Case #2	Administer Vaccinations of Patient
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Trigger	User clicks on “Administer Vaccinations of Patient ” link on the home page																									
Pre-Conditions	Patient details are in the database/cloud																									
Post-Conditions	Details of vaccination administered for Patient are stored in database/cloud																									
UI Screen Details	<ul style="list-style-type: none"> <li>• <b>‘Add Vaccination’</b> Details form needs to be displayed on the top. This form is used to enter the details of the vaccination details for a Patient and then store it in the database/cloud. <ul style="list-style-type: none"> <li>○ The form will have Save and Cancel button. Save button, on click, will validate user entry and store details of administered vaccination in database</li> <li>○ The cancel button, on click, will reset this form</li> </ul> </li> <li>• <b>‘Vaccination Card’</b> table needs to be displayed below the ‘Add Vaccination’ Form. This displays the list of <b>all</b> the vaccinations for <b>all</b> the Patient available in the database.</li> </ul> <p><b>‘Add Vaccination’</b> form UI contains the following fields :</p> <table border="1"> <tr> <td>Name of the Patient</td><td>Drop down</td><td>Lists the Patient in the database</td></tr> <tr> <td>DOB (DD-MMM-YYYY)</td><td>Date Value</td><td>Read only. Picked from database for the selected Patient</td></tr> <tr> <td>Vaccination</td><td>Drop down</td><td>Only vaccinations that are due for the given Patient as on current date should be listed. Use AJAX to fetch this list for the selected Patient</td></tr> <tr> <td>Date administered</td><td>Date Value</td><td>Cannot be in future. Value should be on or before today’s date. Preferably use a date picker.</td></tr> <tr> <td>Brand name</td><td>Text Value</td><td>Brand of the vaccine that was given</td></tr> <tr> <td>Given at</td><td>Name of the hospital</td><td>Preferably, provide auto-complete suggest options with whatever hospitals that were already entered</td></tr> <tr> <td>Save</td><td>Button</td><td>On click, will validate user entry and store details of administered vaccination in database</td></tr> <tr> <td>Cancel</td><td>Button</td><td>On click, resets this form</td></tr> </table> <p>The <b>‘Vaccination Card’</b> table is displayed with the following columns. By default the records are sorted first based on Name of the Patient, then by Age, both in ascending order. Every column header should be clickable to toggle the sorting between Ascending and descending.</p> <ol style="list-style-type: none"> <li>1. Name of the Patient</li> <li>2. Age (Age range for the vaccine in months)</li> <li>3. Vaccine name</li> <li>4. Due date – Calculated based on First Vaccine</li> <li>5. Given on (Empty if not present)</li> <li>6. Brand given (Empty if not present)</li> </ol>		Name of the Patient	Drop down	Lists the Patient in the database	DOB (DD-MMM-YYYY)	Date Value	Read only. Picked from database for the selected Patient	Vaccination	Drop down	Only vaccinations that are due for the given Patient as on current date should be listed. Use AJAX to fetch this list for the selected Patient	Date administered	Date Value	Cannot be in future. Value should be on or before today’s date. Preferably use a date picker.	Brand name	Text Value	Brand of the vaccine that was given	Given at	Name of the hospital	Preferably, provide auto-complete suggest options with whatever hospitals that were already entered	Save	Button	On click, will validate user entry and store details of administered vaccination in database	Cancel	Button	On click, resets this form
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Main Flow	When the page is loaded the ‘Add Vaccination’ form and the ‘Vaccination Card’																									

	<p>table are displayed one below the other.</p> <p>The 'Vaccination Card' table is initially loaded with details in Database. Once the data is entered through the 'Add Vaccination' form and stored successfully, the report gets updated</p>
Data Validations	<ul style="list-style-type: none"> <li>• Input data has to be validated for numeric and date data fields.</li> <li>• Following fields are mandatory – Name of the Patient, Vaccination and Vaccination given date</li> </ul>
Business Rules	<ul style="list-style-type: none"> <li>• All vaccines in the system have to be displayed irrespective of whether it is given to the Patient or not</li> <li>• Only when a vaccine is administered on the Patient, "Given on" column is populated</li> </ul>
Exception Flows	In case of any failure in Data Validation or Business Rules, user should be brought back to the same screen along with a relevant error message
Alternate Flows	<ul style="list-style-type: none"> <li>• When the user selects "Cancel" button, the form "Add Vaccination" should be reset</li> <li>• When the user selects "Close" button, s/he should be taken back to the home page</li> </ul>