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| **Medium** | **2017** |

**Capabilities covered:**

* Understand the web standards, patterns & protocols
* Define client & server architecture
* Implement Web UI that meets the functional specifications
* Add actions, interactions, business logic using JavaScript (ES6 & TS)
* Develop responsive pages using Material Design, Bootstrap & Media Query
* Follow coding standard and maintain high quality by analysing various reports generated through code quality tools

# Vaccination Schedule System

Design and implement a system for parents to maintain vaccination schedule for their children. It will be used by a parent to add a child, add vaccination given details and view vaccination card for their children.

* The home page contains the following links
  + Add a child
  + Administer Vaccinations of Children

# System Features

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| **Use Case #1** | **Add a child** |
| Trigger | Parent clicks on “Add a child” link on the home page |
| Pre-Conditions | - |
| Post-Conditions | The complete information about the child is stored in the application database |
| UI Screen Details | The input form contains the following fields   |  |  |  | | --- | --- | --- | | Name of the Child | Text value |  | | DOB (DD-MMM-YYYY) | Date Value | Preferably use datepicker control from jquery. | | Gender | Drop down | Values Male, Female | | Place of Birth | Text Value |  | | Hospital Name | Text Value |  | | Blood Group | Drop down | Values O+, O-, A+, A-, B+, B-, AB+, AB- | | Height at the time of birth (cms) | Decimal (Positive) |  | | Weight at the time of birth (kg) | Decimal (Positive) |  | | Save | Button |  | | Cancel | Button |  | |
| Main Flow | The parent provides the required details in the form and Clicks “Save” button. On successfully saving the child’s details, parent is forwarded to the home page along with the message “Child’s details have been saved successfully” |
| Data Validations | * Input data has to be validated for numeric and date data fields. * Following fields are mandatory – Name and DOB |
| Business Rules | * Name of the child should be unique |
| Exception Flows | * In case of any failure in Data Validation or Business Rules, parent should be brought back to the screen along with the error message “The value provided for the field …. Is incorrect or incomplete” |
| Alternate Flows | * When the parent selects “Cancel” button, parent should be taken back to the home page |

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| **Use Case #2** | **Administer Vaccinations of Children** |
| Trigger | Parent clicks on “Administer Vaccinations of Children ” link on the home page |
| Pre-Conditions | Children details are in the database |
| Post-Conditions | Details of vaccination administered for children are stored in database |
| UI Screen Details | * ‘**Add Vaccination**’ Details form needs to be displayed on the top. This form is used to enter the details of the vaccination details for a child and then store it in the database.   + The form will have Save and Cancel button. Save button, on click, will validate user entry and store details of administered vaccination in database   + The cancel button, on click, will reset this form * ‘**Vaccination Card**’ table needs to be displayed below the ‘Add Vaccination’ Form. This displays the list of **all** the vaccinations for **all** the children available in the database.   ‘**Add Vaccination**’ form UI contains the following fields :   |  |  |  | | --- | --- | --- | | Name of the Child | Drop down | Lists the children in the database | | DOB (DD-MMM-YYYY) | Date Value | Read only. Picked from database for the selected children | | Vaccination | Drop down | Only vaccinations that are due for the given child as on current date should be listed. Vaccination along with Dose no should be shown like “Polio – Dose 1”. Use AJAX to fetch this list for the selected child | | Date administered | Date Value | Cannot be in future. Value should be on or before today’s date. Preferably use a jquery date picker. | | Brand name | Text Value | Brand of the vaccine that was given | | Given at | Name of the hospital or clinic | Preferably, provide auto-complete suggest options using AJAX (or jquery controls) with whatever hospitals that were already entered | | Given by | Text Value | Doctor’s name. Preferably, provide auto-complete suggest options using AJAX (or jquery controls) with whatever Doctor name 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 |   The ‘**Vaccination Card**’ table is displayed with the following columns. By default the records are sorted first based on Name of the child, then by Age, both in ascending order. Every column header should be clickable to toggle the sorting between Ascending and descending.   1. Name of the child 2. Age (Age range for the vaccine in months) 3. Vaccine name 4. Dose No 5. Due date – Calculated based on Child’s DOB + end date of the vaccine 6. Given on (Empty if not present) 7. Brand given (Empty if not present) |
| Main Flow | When the page is loaded the ‘Add Vaccination’ form and the ‘Vaccination Card’ table are displayed one below the other.  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 using Ajax |
| Data Validations | * Input data has to be validated for numeric and date data fields. * Following fields are mandatory – Name of the child, Vaccination and Vaccination given date |
| Business Rules | * All vaccines in the system have to be displayed irrespective of whether it is given to the child or not * Only when a vaccine is administered on the child, “Given on” column is populated |
| Exception Flows | In case of any failure in Data Validation or Business Rules, parent should be brought back to the same screen along with a relevant error message |
| Alternate Flows | * When the parent selects “Cancel” button, the form “Add Vaccination” should be reset * When the parent selects “Close” button, parent should be taken back to the home page |