

Event Management

Sure Events is looking for an event management software which will help them to manage their events very effectively along with the attends & location information. As a developer you have been asked to develop the solution using Salesforce Platform. Here is the complete information of the project.

Entities(Objects) Involved –

Location (Address Book)

1. Street (Text)
2. City (Text)
3. State (Text)
4. Postal Code (Text)
5. Country (PickList)
6. Landmark (Text)
7. Verified (checkbox)

Event Organizer

1. Name (Standard field)
2. Email (Email)
3. Alternative Email (Email)
4. Phone (Phone)
5. Alternative Phone (Phone)
6. Address (Lookup - Location)

Event

1. Event # (Standard Auto Number)
2. Name (Text)
3. Status (Created, Published, In Progress, Completed, Post Poned, Cancelled) - Picklist
4. Organizer (Lookup - Event Organizer)
5. Start Date/Time
6. End Date/Time
7. Max Seats (Number)
8. # People Attending (Rollup Summary Field)
9. Remaining Seats (Formula field - "Max Seats - # People Attending")
10. Lookup (Location)
11. Location Verified (**Formula** Location__r.Verified__c)
12. Live? (Checkbox)
13. Recurring? (Checkbox)
14. Event Type (In-Person, Virtual) – Picklist
15. Frequency (Daily, Weekly) – Picklist

Attendees

1. Name (Standard)
2. Email (Email)
3. Phone (Phone)
4. Company Name (Text)
5. Address (Lookup - Location)

Speaker

1. Name (Standard Name Field)
2. Email (Email)
3. Phone (Phone)
4. Company (Text)

Event-Attendee

1. Event (M-D Event)
2. Attendee (M-D Attendee)

Event-Speaker

1. Event (M-D Event)
2. Speaker(M-D Speaker)

Error Log

1. Log Date/Time (Store the Date & Time details when the Error Occurred)
2. Log Details (Stores the Complete Stack Track about the Problem) - Text Area Long
3. Process Name (The Name of Either Apex Class or Apex Trigger) - Text
4. Log # (Auto Generated Number)

During the discussion between the business & client, Few milestones has been decided which are as follows:

Milestone 1 (Object Setup)

#1 Complete the Object Structure, Choose the correct Data Type for each field.

#2 Create a Lightning Application & name it “**Sure Events**” Use a logo of your choice.

Must Have - Each Field must have a valid description & help text. Note to remember is use the Correct Datatype for each field.

Milestone 1.1 -

Validation Rule Setup

#1 - Validation Rule on Event Object

- 1.1 - If Recurring? checkbox is checked then user must need to fill Frequency field & If checkbox is unchecked then User cannot select Frequency field.
- 1.2 - If Virtual is Selected as Value for Event Type field then Prevent User to Select Location on Event Record.
- 1.3 - End Date/Time must be at-least 1 day ahead of Start Date/Time (If there is a value in End Date/Time field)
- 1.4 - If Event Type field value is In-Person then user must need to select Location on Event Record.

#2 - Event Attendee Object

2.1 - Attendee can only be associated with the Event whose End Date is in future & Event Live Checkbox is checked and Event is accepting the Attendees (means Remaining Seats field value is not 0)

#3 - Event Speaker Object

3.1 - Speaker can only be associated with the Event whose End Date is in future & Event Live Checkbox is checked

Milestone 1.2 -

Duplicate Rule Setup

#1 Speaker Object

1.1 - User cannot create duplicate speaker record with the same Email & Phone

#2 Attendee Object

2.1 - User cannot Create duplicate attendee with the Same Name, Email & Phone

#3 Event Organizer Object

3.1 - Apply the same rule as Speaker object for not to having duplicate Organizer in the System

Milestone 1.3

Profile, User, OWD & Role Setup

1.3.1 - Profile Setup -

1.3.1.1 Create 3 Profiles (Clone from Standard User), the name of the profile will be Event Organizer, Event Attendee & Speaker.

1.3.2 - User Setup -

1.3.2.1 - Create users for the testing purpose

1.3.3 - Role Setup -

1.3.3.1 - Create Roles (Organizer & Attendee & Speaker). All roles must report to CEO

1.3.3.2 - Role Hierarchy

- CEO
 - Organizer
 - Attendee
 - Speaker

1.3.4 - OWD Setup -

1.3.4.1 - Check the table for OWD below and make the changes

Object Permission Set-up:- Please provide the objects & fields level permission at the Profile level as per the table below:

Object Name	Event Manager	Speaker	Attendee
Event	CRED	R	R
Event – Organizer	CRE	R	R
Speaker	CRE	CRED	R
Attendee	R	X	CRE
Location	CRED	R	RCE
Event - Speaker	CRED	RCE	R
Event - Attendees	CRED	X	RC

Note: -

C - Create

R - Read

E - Edit

D - Delete

X - No Access

Organization Wide Default :-

Object Name	Organization Wide Default
Event	Public Read Only
Event – Organizer	Public Read Only
Speaker	Private & Create a Sharing Rule to share the Speakers with Organizers (Role)
Attendee	Private & Create a Sharing Rule to share the Speakers with Organizers (Role)
Location	Public Read Only
Event – Speaker	Public Read Only
Event – Attendees	Public Read Only

Sharing Rule Setup:- As per the business requirement, we need to share every Speaker & Attendee record with Organizer Role. For this, you need to setup 2 Sharing Rules as per the below details.

Speaker Object - Create a Sharing Rule which will share the Speaker records with the Role Organizer. And the permission should be Read/Edit.

Attendee Object - Create a Sharing Rule which will share the Attendee records with the Role Organizer. And the permission should be Read/Edit.

Milestone 2 -

Apex Class Development:- Develop a reusable Apex Class which contains a method to insert the Error log Object records. This method must contains the parameters to get the dynamic details of the fields (Log Date/Tile, Log Details & Process Name)

Milestone 3

Trigger Development (Event - Speaker Object) - Develop a Trigger on Event - Speaker object which will throw an error if the Speaker Selected on Event - Speaker Record already have an Event against his name. i.e - For a Speaker there will be only one event at a time. Reject Duplicate Bookings

Milestone 4 -

Trigger Development - Develop an Apex Trigger on **Event Attendee Object (Whenever a New Record gets created)** to send the email to Attendee saying that registration has been confirmed . In the email include the basic details of attendee like name, email, phone. Also, send an email to attendee. Use below format for email

Subject - Pass for the “ Event name Here”

Email Body - Dear Attendee Name,

Thank you for registering for “ Event Name Here” which will be Organized on “ Event Date Here ” & will be held in “Event Location Here”. We are excited to have you, see you in the event.

Find the Google Map Location for the Event Here. (<https://www.google.com/maps/place/>) + Add your Location Here

Thanks,

“Organizer Name Here”

Must Have - Bulk record handling along with the Exception handling.

Use of Handler/Helper Class

Milestone 5 -

Develop Unit Test Cases- Develop the Unit Test for the above Apex Trigger(s) & The code coverage must be at-least 90% for Trigger & Handler/Helper class.

Must Have -

1. At-least 90% code coverage
2. Use of @TestSetup annotation
3. Use of Test.startTest & Test.stopTest
4. Use of Asserts Methods
5. Test must be a test case for negative test case.
6. All test cases must be successfully passed.
7. Use of TestUtility Class (optional)

Milestone 6

Develop Apex Batch - Write an Apex Batch which should purge(delete) all the event records which are more than 2 months old & have been Organized. Hint - Use End Date of the Event & live? checkbox of Event Record.

In the finish method of the batch apex send an email to “ [to your personal email id](#) ” email address saying that execution of the batch has been processed.

1. A handler class must be used for the batch
2. Send Email from the finish method as outlined in the requirement

Milestone 7

Develop Unit Test - Develop the unit test for the above batch with at-least 95% code coverage.

Must Have -

1. Unit Test must be tested for at-least 199 records
2. Code coverage must be 85%

Milestone 8

Make Call-out to SmartyStreets API -

SmartyStreets API is used to verify the address. In this milestone you need to consume <https://smartystreets.com/products/apis/us-street-api> .

Requirement - The business ask is to verify the address of the Location Object. Use the above API to verify the address

& update “**Location Verified**” field on Location Object.

Must Have - Use of Error Handling and code re-usability

Milestone 9

Milestone 9.1

Check this link for more information

<https://www.sfdcpanther.com/how-to-setup-visual-studio-code-and-salesforce-dx/>

- a. Setup VS Code for Non-Scratch Org into your Machine and Connect with Salesforce.
- b. Retrieve the Salesforce Metadata From Salesforce to VS Code
- c. Deploy code to VS code.

Milestone 9.2

Create a Custom Lookup in Lightning Web Component.

Milestone 9.3

Add Event to Salesforce: -

Before we start, create a new RichText Area field on event object and Label it as Event Detail.

Develop a Lightning Web Component which will display the Form Input for the Event to take the input from the user and save the Event Record. The Input Form should contain the below fields from Event object.

- a. Name (Custom Field)
- b. Organizer (Lookup)
- c. Start Date
- d. End Date
- e. Max Attendees
- f. Event Detail Rich Text field

Note: -

1. *We will be using Lightning ui record API to create the record that means no Apex Class is required.*
2. *After Creating the Record, user should be redirect to event detail page.*

Milestone 10

Event Detail Component: - Develop a Lightning Web component to display the event details. This Component will contain some additional details like Speaker Details, Location Details & All Attendees who are attending the Event. So basically this component will have multiple tabs like below. Clicking on Each Tab it should open the detail related to Event.

Note: - This component will be used to display the Event Details.

Event Details	Speaker Details	Location Details	Attendees Details
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Part 1 -

- 1 - Event Details - LDS (Lightning Data Services)
- 2 - Speakers - Data-table

Part 2 -

- 3 - Location Details
- 4 - Attendees Details

Milestone 11

Develop Event List Component: - Develop a Lightning Web Component which display all the events in a DataTable which are Live and on clicking on Event Name page it should redirect to Event Detail Page. Event that are displayed in data-table that StartDate of the event record should be either equals to today or greater.

Must Have: - Search Functionality to search the event based on the name, start date & location.

We will implement this component in 2 part and details are as below.

Part 1 - Develop the component and Display the record in the data-table

Part 2 - Implement the search functionality

Milestone 12

attendeeEvents Component:- Develop a Lightning web component which will sit inside the detail page of the Attendee object and display the details of the Event that attendee has attended or registered. The component must have 2 sections

- 1 - Upcoming Events: - Display all the event that attendee has registered

2 - Past Events - Display all the Event that the user was part of.

Like the Event Detail Component & Event List Component, we will also implement in 2 part. Find the details below.

Part 1 - Implement the Upcoming Event functionality and use lightning accordion to have two separate sections

Part 2 - Implement the Past Events functionality

Milestone 13 -

Modify Event Detail Component: - Add New Speaker Button on Event Speaker Tab and New Attendee on Event Attendees Tab to associate the Speakers and attendees to an event.

Note- We are going to use Lightning Navigation to open the create record wizard for the same.

Milestone 14

Expose Salesforce Object - Develop & Apex Rest to send the Event Details to 3rd party in JSON format.

Note -

Only the event which are live and start date is greater than today should be exposed.

You only need to develop the class. Need not to worry about 3rd party.

Milestone 15

1. Modify the Speaker Object
 - a. Create a URL field (Profile URL)
 - b. Create a Rich Text Area Field (About Me)
2. Add speakerTile Lightning Web Component. Should contain Picture, Name and Email at minimum.