**Technical Design Document - with notes**

**Requirement**

Develop a LWC that will be placed on a Contact record page.Run an apex method that gets the user record information based on the email address of the Contact. The apex method should return a wrapper class object back to the LWC. The LWC will display the user information if found, alternatively will display appropriate messages if a user is not found or if the Contact record does not have an email address.

Write a test class for the apex class written in requirement 1.

Control visibility of the component to only allow users with a “System Administrator” profile to have visibility.

**Approach**

1. A new tab ‘User Information’ has been created on the contact record page in Salesforce.
2. A Lightning web component has been created and placed under the tab created.
3. Below are the list of classes and Lightning components created to support this functionality
   1. Apex classes
      1. UserInformationWrapper.cls
      2. UserInformationTest.cls
   2. Lightning component
      1. userInformation.html
      2. userInformation.js
      3. userInformation.js-meta.xml
4. **userInformation.html** - Displays the component layout fields related to user information.
5. **userInformation.js** - Gets the email address of the contact record through getRecord method and passes to the Apex class and gets back a wrapper class object.
6. **userInformation.js-meta.xml** - Exposes our component on the targets mentioned.
7. **UserInformationWrapper.cls** - Handles the calls coming from the js file and performs SOQL operation to return back a wrapper class object.
8. **UserInformationTest.cls** - Test class for UserInformationWrapper.

**My Notes**

* I have created a user with the given email address and username. Please click on the below link to access the org :

[Home | Salesforce](https://d8e000001dtxxea0-dev-ed.develop.lightning.force.com/lightning/page/home)

* I have considered important fields from the User object to be displayed on the component. We could add more fields if necessary.
* The Apex class method performs SOQL query and returns back a wrapper class object. Since only one user record detail gets fetched at a time through the query, the method in the Wrapper class returns a wrapper class object instead of wrapper class object list.
* I haven’t used a for-each loop in the html since only one record detail needs to be displayed on the html. In case we had multiple records to be shown , for-each loop would be the best option.
* In the js, I’ve used wire services as they align well with the getRecord and getFieldValue methods and also since I am not calling the Apex class method on demand or on a button click, there is no point in calling imperatively.
* I have just displayed messages on the component in case the user is not found or if the Contact record does not have an email address. We could alternatively show it as an error using ShowToast. But since this is not an error exactly , I displayed it as a message.

**Use Cases**

**Use Case 1** :

**Action** - When the user clicks on the ‘User Information’ tab on the Contact record page which has an email address and has user information.

**Result** - User views all the user related information on the page (Screenshot 1).

**Use Case 2** :

**Action** - When the user clicks on the ‘User Information’ tab on the Contact record page where the user information is not available in Salesforce.

**Result** - User views a message ‘ This contact record does not have any user information’ (Screenshot 2) .

**Use Case 3** :

**Action** - When the user clicks on the ‘User Information’ tab on the Contact record page which has doesn't have an email address

**Result** - User views a message ‘This contact record does not contain an email address to display its related user information’ on the page (Screenshot 3).