CS 499 Milestone Four: Database Enhancements

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Brief Description

The app I am working on is a note taking app for job applicants. It will help to organize different jobs that a user has applied to. I based it on a personal portfolio application that I created in CS 360 Mobile Application Development that I was unable to retrieve from a broken computer. I began creating this new app during module one and completed it in module two.

Justification

This artifact will allow me to meet all the requirements of the final project by showing my skills in software design/engineering, algorithms and data structures and databases. I would like to improve my mobile application skills because that is the area I would like to work in someday, developing and maintaining mobile apps. By completing this project, I can show that I can create a working app from start to finish and that I understand the basic structures of development. I have made significant design updates since module one and two to the app by adding a login screen, Google maps, and allowing the user to save contact information for each job along with pertinent notes.

Course Objectives

I did find a way to save the contact information using shared preferences and created a database for the specific contact data. The user can save and retrieve contact data, but it is not functioning exactly the way I want it to. I would appreciate feedback on how I can improve it. Right now, you can add a company along with the contact information, but you must enter a character into the notes at the bottom to save the company name. Once the contact information is entered the user can click to add/save it and it will save it. However, when retrieving the contact information once the ‘Retrieve’ button is clicked it brings up only the very last contact information entered. For example, if I have a company called Lowe’s with Bob’s contact information saved and then I add Home Depot with Tina’s information and save it when I try to retrieve Bob’s data it will retrieve Tina’s even if I am in the Lowe’s note.

I also am still working on saving the username and password with shared preferences so that the user does not have to keep entering their email and password when the app is opened. I modified the LoginActivity class to include shared preferences but was unable to get the CheckBox element to work properly in the layout. I had made a login app with shared preferences and added a checkbox and used code inside the login activity class to save the username if the checkbox is checked. That app worked but integrating it into my note app was not working. I even modified the code in my note app so that as soon as the Login button is clicked it would automatically save the login data using shared preferences, but it is not working. I have left that code in place so you can see it because it is not adversely affecting the functionality of the app. I had wanted to expand the functionality of my login page with Firebase. I attempted to integrate Firebase into the application but ran into compatibility issues. I can get Firebase to work with the app but then it negates the current login activity I have inserted so I would need to rebuild the login screen. I am going to attempt to complete the Firebase login authentication in a new application and then try to add my note files into it. The only issue is time and I am not sure I will have enough to get that done but I am going to try.

Reflection & Challenges

The way I completed it is by first updating the layout for the note in the activity\_note.xml file. I needed to add a field for the contact email address and a button that will be used to save the contact name, phone number, contact email and address to the database. Next, I had to add a few classes to handle the database information that was being added. These new classes are Jobs, JobsDBHandler, and DatabaseActivity. While it is completely possible to hold multiple tables in an SQLite database for simplicity reasons, I created a separate database for the job contact information so that it could be completed on time since I am not sure how to alter the current database to create the new table in it. The files I added are based on the original application that was created in CS 360 Mobile Application Development (My Personal Portfolio app) which I modified to suit the needs of this new career search note taking app. JobsDBHandler .java shows the creation of the table and the rows which consist of contact name, phone number, contact email and contact address.

The notes section saves the data and displays it and at this point but if no characters are entered into the note portion the company will not be saved. Using shared preferences, the contact information can be saved and retrieved but it only retrieves the very last contact information saved and is not specific to the note that is saved. I want to figure out how to save and retrieve the very data saved inside each different company note. While I am pleased that I can save the contact information and retrieve it, I need to keep searching on how to get it to operate the way I need it to. I may try to put the save and retrieve methods inside the methods for saving the additional notes and company name somehow so that each note has the right information in it.

Each week I learn more about application development. I have run into many challenges due to my lack of experience which makes it vital to research different methods of achieving my goals. I have learned how to implement functionality in the buttons and edit text fields, how to create a SQLite database as well as the limitations and benefits of shared preferences. I think being able to research solutions is a key to completing a successful project.

