Tunku Abdul Rahman University of Management and Technology
BAIT2073 Mobile Application Development

Task Description

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Programme   : RSD2   Group : 5

Instruction: Answer **ALL** the questions. You may insert extra pages.

1. Please briefly describe the module(s)/function(s) you engaged in the assignment.

1. **Login/Login with Google email or Email:**

   - **Description:** This module allows users to log in to the application using their email and password or through their Google account.
   - **Functionality:** Users can enter their credentials (email and password) or use the Google Sign-In option to authenticate themselves and access the app.

2. **Register with Google email or Email:**

   - **Description:** This module enables new users to create an account using their email and password or by linking their Google account.
   - **Functionality:** Users can fill out a registration form with their email and password to register quickly using their Google account. Upon successful registration, the user's information is stored in the app's database.

3. **Forgot Password - Send Email Authorization:**

   - **Description:** This module provides a way for users to reset their password if they forget it.
   - **Functionality:** Users can request a password reset by entering their registered email address. The system sends an email with a reset link to allow the user to create a new password.

4. **Profile Setup Page:**

   - **Description:** This module allows new users to initial their personal information to their profile.
   - **Functionality:** To gather and initialize essential user information during their first login, ensuring a personalized and complete user profile.

5. **Profile Page:**

   - **Description:** This module displays the user's profile information.
   - **Functionality:** Users can view their profile details such as username, email, profile picture, and other personal information. This page serves as the user's personal dashboard within the app.

6. **Edit Profile:**

   - **Description:** This module allows users to update their profile information.

- **Functionality:** Users can change their personal details, such as their username, email, and profile picture. The updated information is saved to the database, and the profile page is refreshed to show the changes.

7. **Show User's Post in Profile Page:**

   - **Description:** This module displays the posts created by the user on their profile page.
   - **Functionality:** Users can see a list of their posts, including text, images, or other content they have shared. This allows users to easily manage and review their contributions to the app.

8. **Sign Out:**

   - **Description:** This module allows users to log out of the application securely.
   - **Functionality:** Users can sign out from their account, which will terminate the current session and redirect them to the login page. This ensures that no unauthorized access can occur after the user leaves the app.

2. What are the strengths of the modules/functions created by you?

1. **Login/Login with Google or Email:**

   o **Multiple Authentication Options:** Provides flexibility for users to log in using either email/password or their Google account.
   o **Security:** Utilizes secure authentication mechanisms, reducing the risk of unauthorized access.
   o **User Convenience:** Google Sign-In offers a quick and trouble-free login process, improving user experience.

2. **Register with Google or Email:**

   o **Ease of Use:** Simplifies the registration process by offering a quick Google Sign-Up option.
   o **Accessibility:** Allows users who prefer different methods of registration to choose their preferred method.
   o **Integration:** Smooth integration with Google services ensures seamless account creation and management.

3. **Forgot Password - Send Email Authorization:**

   o **User Support:** Provides a straightforward way for users to recover their accounts, enhancing user support and satisfaction.
   o **Security:** Sending an email authorization link ensures that only the account owner can reset the password.
   o **Reliability:** Email-based password recovery is a well-established and trusted method.

4. **Profile Setup Page:**
   o **Quick Setup:** Streamlines the initial setup process, enabling users to quickly input their information and start using the app without unnecessary delays.
   o **Data Validation:** Ensures that all required fields are completed correctly, reducing the chances of errors and the need for subsequent corrections.

5. **Profile Page:**

   o **User-Centric:** Displays relevant and personalized information, making it easy for users to access their details.

6. **Edit Profile:**

   o **Flexibility:** Allows users to update their information as needed, keeping their profile current.
   o **User Control:** Empowers users by giving them control over their personal data.
   o **Real-Time Updates:** Immediate reflection of changes enhances the user experience.

7. **Show User's Post in Profile Page:**

- o **Personalized Content:** Displays the user's own posts, providing a personalized view of their activity.
- o **Content Management:** Users can easily manage and review their contributions.
- o **Engagement:** Encourages users to stay active and engaged by showcasing their posts.

8. **Sign Out:**

- o **Security:** Ensures that users can securely end their session, preventing unauthorized access.
- o **User Clarity:** Clear sign-out functionality helps users understand when they are logged out.
- o **Session Management:** Properly manages user sessions, improving overall app security.

3. What are the weaknesses of the modules/functions created by you?

1. **Login/Login with Google or Email:**

   - **Security Concerns:** May lack robust security measures such as two-factor authentication or encryption, potentially exposing user accounts to vulnerabilities.
   - **Error Handling:** Insufficient error handling may lead to ambiguous error messages or security loopholes that could be exploited by attackers.

2. **Register with Google or Email:**

   - **Data Validation:** Registration process may lack thorough data validation, allowing users to register with incomplete or inaccurate information.
   - **User Verification:** Verification process may be prone to bypassing or manipulation, leading to unauthorized access or fake accounts.

3. **Forgot Password - Send Email Authorization:**

   - **Vulnerability to Email Spoofing:** Email authorization process may be vulnerable to spoofing attacks, where malicious actors impersonate legitimate email addresses to gain unauthorized access.
   - **Limited Recovery Options:** Lack of alternative recovery options (e.g., security questions, phone verification) may make it difficult for users to regain access to their accounts if they lose access to their email.

4. **Profile Setup Page:**

   - **Usability Issues:** The setup process may be overly complex or cumbersome, leading to user frustration and abandonment.
   - **Limited Customization:** Lack of customization options may prevent users from personalizing their profiles according to their preferences.

5. **Profile Page:**

   - **Privacy Concerns:** Insufficient privacy controls may expose sensitive user information to unauthorized viewers.
   - **Incomplete Information:** Profile page may lack comprehensive information or features, limiting its usefulness to both users and others viewing the profile.

6. **Edit Profile:**

   - **Validation Errors:** Inadequate validation checks may allow users to submit invalid or inappropriate information, compromising the integrity of user profiles.
   - **Usability Challenges:** Editing interface may be unintuitive or confusing, leading to user errors or difficulties in updating their profiles.

7. **Show User's Post in Profile Page:**

   - **Content Management:** Limited tools for managing or organizing user posts may result in cluttered or disorganized profile pages, detracting from the user experience.

- **Visibility Controls:** Lack of controls for managing post visibility or audience may lead to unintended sharing of content or privacy breaches.

8. **Sign Out:**

- **Session Management:** Inadequate session management may result in users remaining logged in even after attempting to sign out, compromising account security.
- **Confirmation Mechanism:** Lack of confirmation prompts or verification steps may lead to accidental sign-outs or confusion among users.

4. What have you learned in doing this assignment?
   In this assignment, I learned that it is crucial to have strong security measures in place to protect user data and stop illegal access or breaches. This entails realizing how important it is to put robust security measures in place. To create user-friendly and aesthetically pleasing interfaces that increase user engagement, it is also essential to investigate the fundamentals of user interface and user experience design. Furthermore, recognizing and effectively addressing difficulties during development requires a grasp of the value of testing approaches and debugging techniques.

5. What are the challenges, if any, faced by you while working on this assignment?
   The challenges that I face working on this assignment is to make sure the program is reliable and compatible, it must be thoroughly tested on a variety of devices with different screen sizes and Android versions. To address the complexity of the testing process, this involves testing many scenarios for data management and authentication. Furthermore, keeping the user interface and experience consistent across different panels and modules is also essential. To create a seamless user experience, maintaining this consistency is particularly crucial when switching between various activities or program parts.

Signature: Date: 17/05/2024