VERITECH – WEB DEVELOPMENT INTERN

TASK – 3

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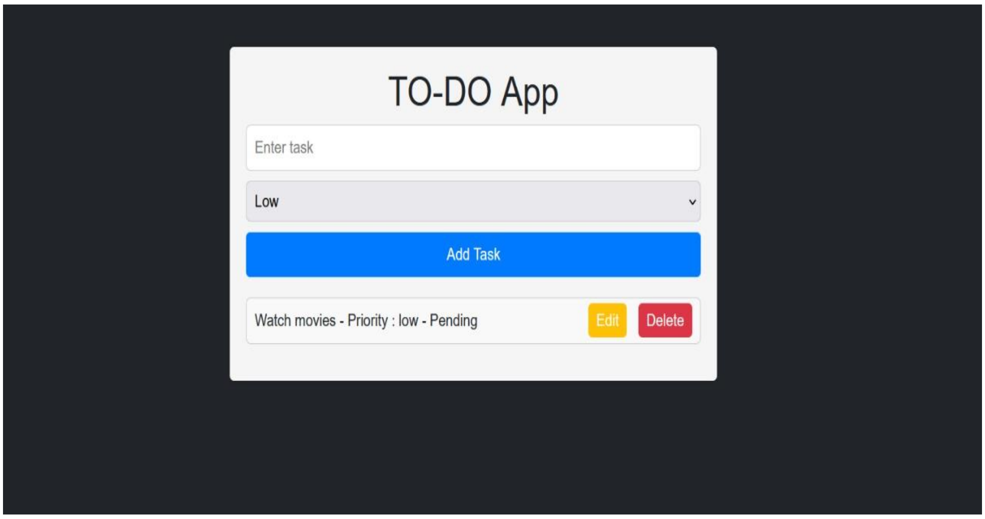
TASK: TO – DO App Development .

The goal of this project is to develop a To-Do List App project aimed to develop a mobile application for task management to help users organize their tasks efficiently. The app provides features such as task management, user authentication, intuitive user interface, data storage, reminders and notifications, and additional features for enhanced productivity.

Technologies Used:

- Android Studio for Android app development.
- Firebase for user authentication and data storage.
- Firebase Cloud Messaging for push notifications.
- Git for version control and collaboration.
- Java/Kotlin programming languages for Android development.
- XML for layout design.
- Adobe XD for prototyping and UI design.

REFERENCE DESIGN



Watch movies - Priority : low - Pending

JAVA CODE

I'll provide code snippets for some key functionalities of the Simple To-Do List App:

1. User Authentication (Using Firebase Authentication):

```
java
// Firebase Authentication initialization
FirebaseAuth mAuth = FirebaseAuth.getInstance();

// Method to handle user registration
private void registerUser(String email, String password) {
   mAuth.createUserWithEmailAndPassword(email, password)
      .addOnCompleteListener(this, new OnCompleteListener<AuthResult>() {
         @Override
         public void onComplete(@NonNull Task<AuthResult> task) {
            if (task.isSuccessful()) {
               // Registration successful, proceed to main activity
               startActivity(new Intent(RegisterActivity.this, MainActivity.class));
               finish();
            } else {
               // Registration failed, display error message
               Toast.makeText(RegisterActivity.this, "Registration failed: " +
task.getException().getMessage(),
                     Toast.LENGTH_SHORT).show();
            }
         }
      });
}

// Method to handle user login
private void loginUser(String email, String password) {
   mAuth.signInWithEmailAndPassword(email, password)
      .addOnCompleteListener(this, new OnCompleteListener<AuthResult>() {
         @Override
         public void onComplete(@NonNull Task<AuthResult> task) {
            if (task.isSuccessful()) {
               // Login successful, proceed to main activity
               startActivity(new Intent(LoginActivity.this, MainActivity.class));
```

```
                    finish();
                } else {
                    // Login failed, display error message
                    Toast.makeText(LoginActivity.this, "Login failed: " +
task.getException().getMessage(),
                            Toast.LENGTH_SHORT).show();
                }
            }
        });
}
```

2. Task Management (Adding, Editing, Deleting Tasks):

java

```
// Firebase Realtime Database initialization
FirebaseDatabase mDatabase = FirebaseDatabase.getInstance();
DatabaseReference mTasksRef = mDatabase.getReference("tasks");

// Method to add a new task
private void addTask(TaskModel task) {
    String userId = FirebaseAuth.getInstance().getCurrentUser().getUid();
    DatabaseReference userTasksRef = mTasksRef.child(userId);
    String taskId = userTasksRef.push().getKey();
    task.setId(taskId);
    userTasksRef.child(taskId).setValue(task);
}

// Method to edit an existing task
private void editTask(TaskModel task) {
    String userId = FirebaseAuth.getInstance().getCurrentUser().getUid();
    DatabaseReference userTasksRef = mTasksRef.child(userId);
    userTasksRef.child(task.getId()).setValue(task);
}

// Method to delete a task
private void deleteTask(String taskId) {
    String userId = FirebaseAuth.getInstance().getCurrentUser().getUid();
    DatabaseReference userTasksRef = mTasksRef.child(userId);
    userTasksRef.child(taskId).removeValue();
}
```

These are simplified code snippets demonstrating user authentication, task management, and Realtime Database. Make sure to integrate them into your project structure and handle errors and edge cases appropriately. Let me know if you need further assistance