Android APP Development

Section 1 – Android App Development - Essential

- **Layouts, Button, TextView, EditText, Events, LinearLayout**
- **RadioButton, CheckBox, Switch, ImageView**
- **MultiActivity App and Activity Lifecycle**
- **Option Menu, ContextMenu, PopupMenu**
- **ActionBar, ParentActivity**
- **GridLayout, ConstraintLayout, Dialogs**
- **ListView and GridView**
- **Custom ListView, GridView, AutoComplete TextView**
- **RDBMS Concepts and SQLite programming**
- **ProgressBar Content Provider and AccessContacts, Gallery Images**
- **Playing Gallery Audio and Video**
- **Theme, Animation and localization**
- **Intent filter, Broadcast Reciever, Receiving SMS, Launching Browser,Gallery,Camera,Map**

*1. Develop a note-taking app that allows users to create, edit, and delete notes. Implement features such as displaying a list of notes, adding new notes, editing existing notes, and deleting notes. Use SQLite database to store and retrieve note data.
*2. Develop a weather forecast app that retrieves weather data from an API and displays the current weather conditions and a forecast for multiple days. Implement features like fetching data using network requests, parsing JSON responses, and displaying the weather information using appropriate UI components.
*3. Build a movie catalog app that fetches movie data from an API and displays a list of movies. Implement features like searching for movies, displaying movie details, and saving favorite movies. Use Recycle View to display the movie list and SQLite database to store favorite movie data.
*4. Develop a music player app that can play audio files stored on the device. Implement features such as a music library, play/pause controls, progress bar, and navigation between songs. Use Media Player class to handle audio playback and implement appropriate UI Components.

#1. Develop a recipe finder app that allows users to search for recipes based on keywords. Implement features like displaying search results, showing recipe details, and saving favorite recipes. Use ListView or RecyclerView to display the search results and SQLite database to store favorite recipes.
#2. Build a social media sharing app that allows users to share photos and posts with their friends. Implement features like capturing and uploading photos, writing and sharing posts, and displaying a news feed. Use the camera API to capture photos and implement appropriate UI components for post creation and sharing.
#3. Build a location tracker app that tracks the user's location in real-time and displays it on a map. Implement features like displaying the user's current location, tracking movement, and displaying a route on the map. Use Google Maps API to integrate maps and location services.
#4. Develop a quiz app that presents multiple-choice questions to the user and tracks their score. Implement features like displaying questions, recording answers, calculating the score, and providing feedback. Use appropriate UI components for displaying questions and options, and implement a scoring system

Section 2 – Android App Development - Advanced

- **HttpUrlConnection, DownloadingImages**
- **Volley Library – String request JSON structure, JSON GET, POST,PUT DELETE**
- **Fragments Concept, Fragment Manager, Fragment Transaction**
- **ViewPager and Tabs NavigationDrawer**
- **Service Concept and lifecycle, SensorManager, Alarms and Notifications**
- **Location Tracking and GeoCoding, Google Map**
- **Firebase Cloud Messaging, Google Authentication**

.*1. Create an app that allows users to enter a URL and download an image from the provided link using HttpUrlConnection. Implement features such as input validation, progress bar, and image display once downloaded.

*2. Build a location reminder app that allows users to set reminders based on their current location. Implement a background service to track the user's location and trigger notifications when they enter a predefined area. Utilize the SensorManager for location tracking.

*3. Create a chat app that utilizes Firebase Cloud Messaging for real-time messaging between users. Implement features such as sending and receiving messages, displaying notifications for new messages, and managing user authentication using Firebase Authentication.

#1. Develop a news reader app that displays news articles using fragments and ViewPager. Implement tabs for different news categories and allow users to swipe between tabs to view articles. Use FragmentManager and FragmentTransaction to manage fragments.

#2. Develop a map-based app that integrates Google Maps API to display the user's current location and perform geocoding to convert addresses into coordinates. Implement features like showing markers on the map, searching for locations, and calculating routes.