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Question Paper Code : 90250

M.C.A. DEGREE EXAMINATIONS, APRIL/MAY 2022.

Second Semester

MC 4204 – MOBILE APPLICATION DEVELOPMENT

(Regulations 2021)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What type of essential Android components are required for each of the given below scenarios? Defend your answer.
 - (a) Alarm App – to set alarm time and it will alarm on the specified time.
 - (b) Chat App – to send text messages, photos and videos.
 - (c) System Updater App – to download and update the operating system only if the battery level is not low.
2. Which are the frameworks used predominantly in developing mobile application?
3. What is the importance of XML – based layouts?
4. What is Voice XML in mobile application development?
5. What is AIDL?
6. Write the purpose of Date Picker, Time Picker, Spinner, Radio button and Radio Group
7. Is it possible to use or add a fragment without using a user interface? Justify your answer.
8. What is a Native Mobile Application Development?
9. Activity and fragment, how are they related? How does their life cycle differ?
10. Define a Pending Intent. Explain its role in setting an alarm in any application.

PART B — (5 × 13 = 65 marks)

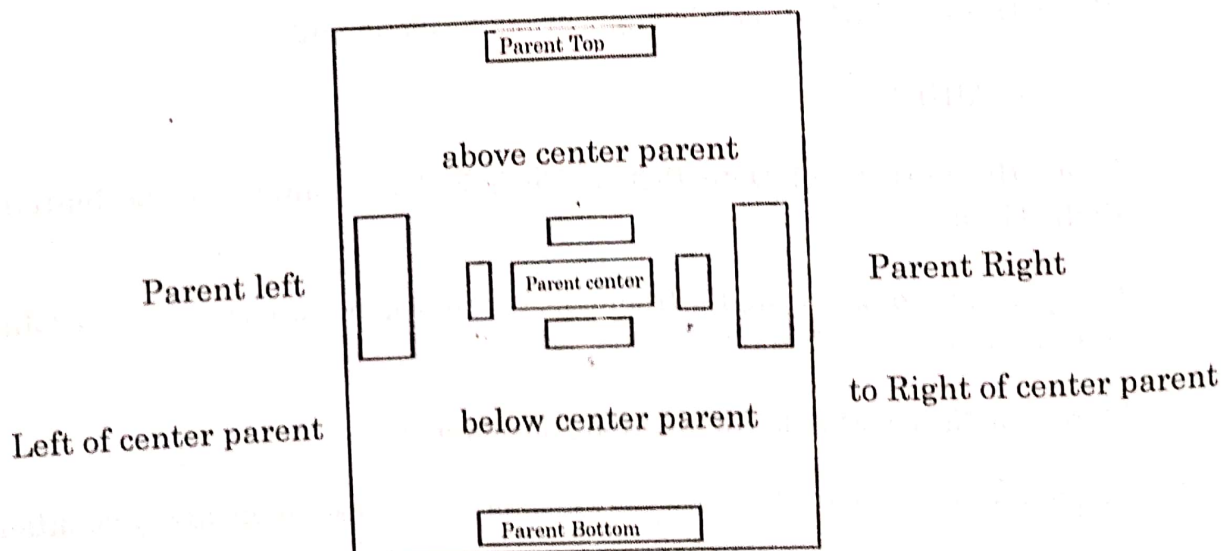
11. (a) Explain in detail about the Architecture Stack of Android.
Or

- (b) (i) Differentiate between JVM and DVM. (6)
(ii) Write short notes on native libraries and Android SDK. (7)

12. (a) Create a given below registration form (activity screen) using XML file and when the user click on Register Button, pass those all entered data with intent and display it in another activity (next screen) using java code.

Or

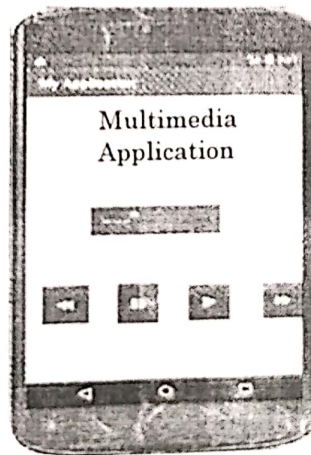
(b) Compare and contrast between Relative Layout, Linear Layout, Table Layout and Absolute Layout of an activity. Illustrate all the attributes of below relative layout with an example.



13. (a) Describe how multithreading can be performed in android or IOS with an example. (13)

Or

- (b) A Software company wants to develop an android application for a food manufacturing industry. The Android application needs to store the following details. Food Item name, Expiry Date of the food, Is the food Vegetarian or non vegetarian. Does the food contain sugar, artificial color, milk solids or all.
- (i) For each of these details to be stored suggest the most suitable input control type and justify your answer.
- (ii) Represent each of the input control type in XML
- (iii) Write an android snippet which illustrates how data can be extracted from these input controls.
14. (a) Develop an android application for the below requirements and write basic XML elements with its mandatory attributes define a method named fetch_Song() to get the details of the media file and java code for the working of Rewind, Start, Pause and Fast Forward functionalities.

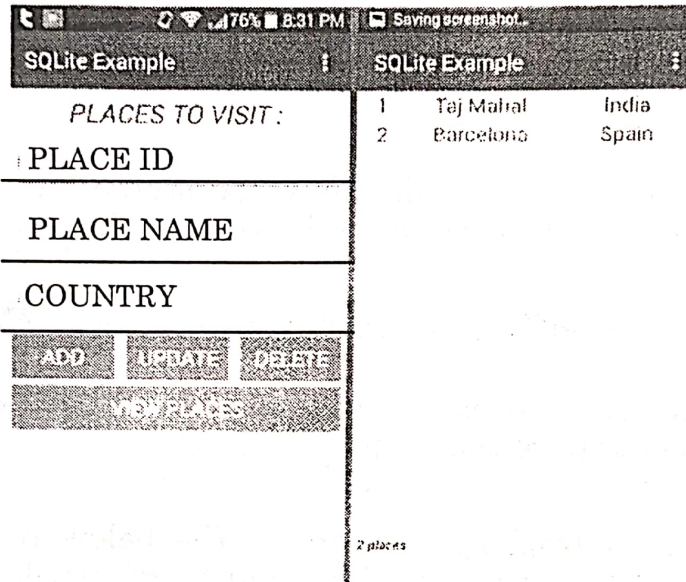


Or

- (b) Explain the anatomy of mobile application in detail. Illustrate the same with a simple example.
15. (a) (i) Explain the VideoView in android studio to display video file. Discuss various methods with an example.
- (ii) Discuss different ways of animating a user screen.
- Or
- (b) Design an app for temperature converter (i.e) Fahrenheit to Celsius converter $[(F - 32) \times 5/9] = C$. Input is the Fahrenheit and output is the Celsius, design the screen accordingly.

PART C — (1 × 15 = 15 marks)

16. (a) Create a given below app to store and retrieve details from SQLite database using SQLiteOpenHelper class.



Or

- (b) Discuss about the various challenges for smartphone mobile security. Write an Android Program to display the current location of a device in a Android Google Map? Identify the run-time permissions that needs to be enabled to support this Feature?
