

## GANPAT UNIVERSITY

**B. TECH (CE/IT/CE-AI) SEM-V REGULAR EXAMINATION– NOV-DEC 2021**  
**2CEIT5PE5: MOBILE APPLICATION DEVELOPMENT**

Time: 1.5 Hours]

[Total Marks: 30

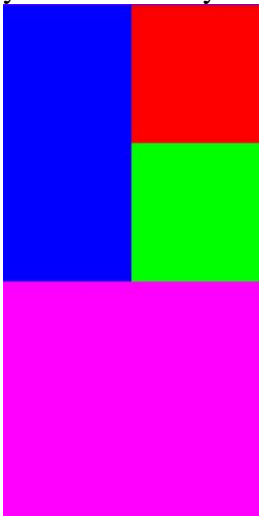
**Instructions:**

1. Figures to the right indicate full marks.
2. Be precise and to the point in your answer.
3. Assume the suitable data wherever necessary.

- Q-1** As shown in Code of DatabaseHelper.kt, write down only three methods: 1. deleteNote, 2. allNotes, 3. insertNote (No need to write given full code, just write down only three methods) Description of methods: **[5]**
1. **deleteNote:** It will delete a single note from SQLite Database.
  2. **allNotes:** It will fetch all notes from SQLite Database.
  3. **insertNote:** It will insert a single note in SQLite Database.

```
class DatabaseHelper(context: Context?) :
    SQLiteOpenHelper(context, "notes_db", null, 1) {
    override fun onCreate(db: SQLiteDatabase) {
        db.execSQL(NotesData.CREATE_TABLE)
    }
    override fun onUpgrade(db: SQLiteDatabase, oldVersion: Int, newVersion: Int) {
        db.execSQL("DROP TABLE IF EXISTS " + NotesData.TABLE_NAME)
        onCreate(db)
    }
    fun insertNote(note: Notes): Long {
        // Write Code Here
        // return newly inserted row id
        return id
    }
    private fun getValues(note: Notes): ContentValues{
        val values = ContentValues()
        // `id` will be inserted automatically.
        values.put(NotesData.COLUMN_NOTE_TITLE, note.title)
        values.put(NotesData.COLUMN_NOTE_SUB_TITLE, note.subTitle)
        values.put(NotesData.COLUMN_NOTE_DESCRIPTION, note.Description)
        values.put(NotesData.COLUMN_NOTE_REMINDER_TIME, note.remindertime)
        values.put(NotesData.COLUMN_NOTE_SET_REMINDER, note.isReminder)
        values.put(NotesData.COLUMN_TIMESTAMP, note.modifiedTime)
        return values
    }
    fun getNote(id: Long): Notes {
        val db = this.readableDatabase
        val cursor = db.query(
            NotesData.TABLE_NAME,
            arrayOf(NotesData.COLUMN_ID, NotesData.COLUMN_NOTE_TITLE,
                NotesData.COLUMN_NOTE_SUB_TITLE, NotesData.COLUMN_NOTE_DESCRIPTION,
                NotesData.COLUMN_NOTE_SET_REMINDER,
                NotesData.COLUMN_NOTE_REMINDER_TIME, NotesData.COLUMN_TIMESTAMP),
            NotesData.COLUMN_ID.toString() + "=?",
            arrayOf(id.toString()), null, null, null, null
        )
        cursor?.moveToFirst()
        val note = getNote(cursor)
        cursor!!.close()
        return note
    }
    private fun getNote(cursor: Cursor): Notes
    {
        val note = Notes(
            cursor.getString(cursor.getColumnIndex(NotesData.COLUMN_NOTE_TITLE)),
            cursor.getString(cursor.getColumnIndex(NotesData.COLUMN_NOTE_SUB_TITLE)),
            cursor.getString(cursor.getColumnIndex(NotesData.COLUMN_NOTE_DESCRIPTION)),
            cursor.getString(cursor.getColumnIndex(NotesData.COLUMN_TIMESTAMP))
        )
        note.isReminder =
        (cursor.getInt(cursor.getColumnIndex(NotesData.COLUMN_NOTE_SET_REMINDER))==1)
        note.remindertime =
        cursor.getLong(cursor.getColumnIndex(NotesData.COLUMN_NOTE_REMINDER_TIME))
        note.id = cursor!!.getInt(cursor.getColumnIndex(NotesData.COLUMN_ID))
        return note
    }
    val allNotes: ArrayList<Notes>
    get() {
        val notes = ArrayList<Notes>()
        // Write Code Here
        return notes
    }
    fun deleteNote(note: Notes) {
        // Write Code Here
    }
}
```

- Q-2** What type of layout views are available to android developers for designing an application? Which layout is very suitable to create a UI as shown in the image below? Explain by writing **only an xml file** to design the UI as shown in image. (Note: you can't use absolute value in attributes layout\_width & layout\_height, you can use only match\_parent, wrap\_content, 0dp in layout\_width & layout\_height attributes of layout) **[5]**



- Q-3** Assume that editMessage & editPhoneNo are objects of class EditText where editMessage is used to write SMS message & editPhoneNo is used to write Phone Number to send SMS. **[5]**
1. Write code of class SMSBroadcastReceiver to receive SMS in Android 6.0 or above and send SMS by using editMessage & editPhoneNo.
  2. Write code of SMS permissions & BroadcastReceiver inside manifest file. (No need to write other code of manifest file).
- Q-4** Justify, whether google map activity and google maps implicit intent are the same? Write the code (only onMapReady() function) that do the following operations: **[5]**
1. change google map type to TERRAIN
  2. set the Zoom level to 15.
  3. change the icon with a drawable image file name image1.
  4. set the location to Ahmedabad.
  5. set the title to Ahmedabad and snippet to Welcome to Ahmedabad

- Q-5

What are the differences between Activity and service? Write a code to develop a music player application with play, pause and stop functionality with service. (**Note:** Write Kotlin files & manifest file only)

[5]
- Q-6

Explain step by step functionality of Android Architecture and iOS Architecture with below mentioned example. (**Example:** while clicking an icon of an facebook application in Android and iOS operating System).

[5]
- \*\_\_\_\_\*\_\_\_\_\*