



**Sarhad University of Science and Information
Technology, Peshawar
Department of CS/IT**

Mid Term Exam Fall 2023

**Mobile Applications Development
5th/6th Semester CS and 6th Semester SE**

Time Limit: 90 mins

Total Marks: 30

Q-1: Short questions: (12 Marks)

- Write three common data types used in Dart.
int, double, num, String, bool, List
- What are the two most commonly used IDEs to develop Flutter apps?
VS Code, Android Studio
- Which website is used to run Dart code online? Give URL.
Dartpad.dev
- Declare a List in Dart that stores the numbers 21, 0.5, 10, 2.5
List nums = [21, 0.5, 10, 2.5];
- Which three keywords are used in Dart to implement asynchronous programming?
await, async, Future
- Which two dependencies are required to `pubspec.yaml` file in order to use SQLite database in Flutter app?
sqlite, path

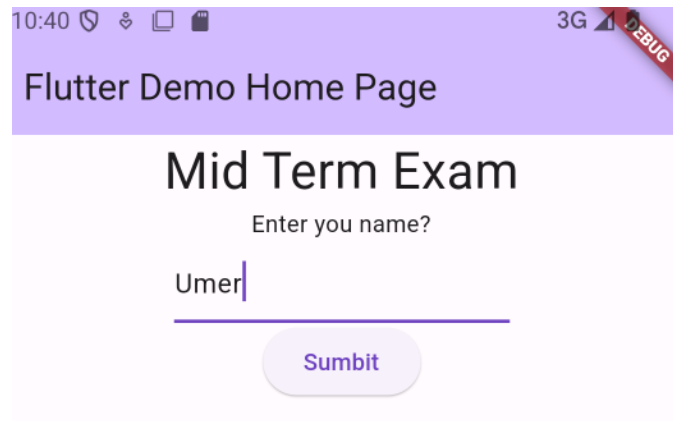
Q-2: Write syntax of: (4 marks)

- `if` statement in Dart.
If (expression)
 Statement;
[else
 Statement;]
- `for` loop in Dart.
for(statement ; statement ; statement)
 statement;

Q-3: Write a short note on SharedPreferences OR SQLite database in Flutter. (4 marks)

An app may require data/information to be stored when the app is closed. Data is can be accessed when app is re-opened. Local storage of the device may be used for storing data/information permanently. It is called data persistence. There are two methods used in Flutter for local data persistence i.e. using SharedPreferences and SQLite database. The two data persistence methods depends on the type and size of data to be stored. For small data like user preferences, SharedPreferences are used. For databases, SQLite is used. SQLite is a lightweight relational database management system (RDBMS) that's embedded within the application.

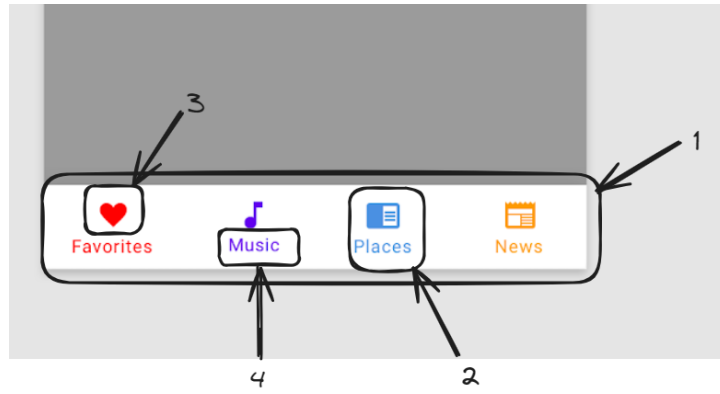
Q-4: Write code inside Column to create the following screen. When the user clicks on the "Submit" Button, the app prints "Hello Umer" in the terminal windows. (6 marks)



```
class _MyHomePageState extends State<MyHomePage> {
  TextEditingController tcName = TextEditingController();
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: Center(
        child: Column(

          children: [
            Text("Mid Term Exam", style: TextStyle(fontSize: 30)),
            Text("Enter Your name?"),
            TextField(controller: name,),
            ElevatedButton(
              onPressed: () {
                String n= name.text;
                print("Hello $n");
              },
              child: Text("Submit"))
          ],
        ),
      ),
    );
  }
}
```

Q-5: Name Widgets given in the diagram: (4 marks)



1. BottomNavigationBar
2. BottomNavigationBarItem
3. label
4. icon