

DAY 3

PROGRAM 1.

```
import 'package:flutter/material.dart';
void main()
{
  runApp(Myapplication());
}
class Myapplication extends StatelessWidget{
  @override
  Widget build(BuildContext context)
  {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: const Text('First Flutter Application'),
        ),
        body:Center(
          child:Text("This is the first app i have been build!! thanks for
understanding",
            style: TextStyle( color: Colors.black, fontSize:
30.0,)),),),),),),);
  }
}
```

First Flutter Application

DEBUG

This is the first app i have
been build!! thanks for
understanding

PROGRAM 2

```
import 'package:flutter/material.dart';
void main()
{
  runApp(Myapplication());
}
class Myapplication extends StatelessWidget{
  @override
  Widget build(BuildContext context)
  {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: const Text('First Flutter Application'),
        ), )) ;
  }
}
```

First Flutter Application

DEBUG

PROGRAM 3




```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: Text('Drawer Example'),
        ),
        drawer: Drawer(
          child: ListView(
            padding: EdgeInsets.zero,
            children: <Widget>[
              DrawerHeader(
                decoration: BoxDecoration(
                  color: Colors.blue,
                ),
                child: Text(
                  'Drawer Header',
                  style: TextStyle(
                    color: Colors.white,
                    fontSize: 24,
                  ),
                ),
              ),
              ListTile(
                leading: Icon(Icons.home),
                title: Text('Home'),
                onTap: () => Navigator.pop(context),
              ),
              ListTile(
                leading: Icon(Icons.calculate),
                title: Text('Calculate'),
                onTap: () => Navigator.pop(context),
              ),
              ListTile(
                leading: Icon(Icons.settings),
                title: Text('Settings'),
```

```
        onTap: () => Navigator.pop(context),
      ),
    ],
  ),
),
body: Center(
  child: Text('Drawer Example App'),
),
),
);
}
```

Drawer Header

-  Home
-  Calculate
-  Settings

DEBUG

PROGRAM 4

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: Text('FloatingActionButton Example'),
        ),
        body: Center(
          child: Text('Press the button below!'),
        ),
        floatingActionButton: FloatingActionButton(
          onPressed: () {
            // Action to perform when the button is pressed
            print('Button Pressed!');
          },
          child: Icon(Icons.add),
          backgroundColor: Colors.pink,
        ),
      ),
    );
  }
}
```


FloatingActionButton Example

DEBUG

Press the button below!



PROGRAM 5

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: Text('Container Example'),
        ),
        body: Center(
          child: Container(
            padding: EdgeInsets.all(35),
            margin: EdgeInsets.all(20),
            alignment: Alignment.center,
            transform: Matrix4.rotationZ(0.1),
            child: Text(
              "Hello! I am in the container widget",
              style: TextStyle(fontSize: 25),
            ),
          ),
        ),
      ),
    );
  }
}
```

Container Example

DEBUG

*Hello! I am in the container
widget*

PROGRAM 6

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: Text('Constraints Example'),
        ),
        body: Center(
          child: Container(
            constraints: BoxConstraints(
              minWidth: 100,
              maxWidth: 200,
              minHeight: 100,
              maxHeight: 200,
            ),
            color: Colors.blue,
            child: Center(
              child: Text(
                'Constrained Container',
                style: TextStyle(
                  color: Colors.white,
                  fontSize: 18,
                ),
              ),
            ),
          ),
        ),
      ),
    );
  }
}
```

Constraints Example

DEBUG

Constrained Container

PROGRAM 7

```
import 'package:flutter/material.dart';

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: Text('Row Widget Example'),
          backgroundColor: Colors.blue,
        ),
        body: Center(
          child: Row(
            mainAxisAlignment: MainAxisAlignment.center,
            children: [
              Container(
                color: Colors.red,
                width: 50,
                height: 50,
              ),
              SizedBox(width: 10), // Space between the boxes
              Container(
                color: Colors.green,
                width: 50,
                height: 50,
              ),
              SizedBox(width: 10), // Space between the boxes
              Container(
                color: Colors.blue,
                width: 50,
                height: 50,
              ),
            ],
          ),
        ),
      ),
    );
  }
}
```

```
}  
}
```

Row Widget Example

DEBUG



PROGRAM 8

```
import 'package:flutter/material.dart';

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: ProfilePage(),
    );
  }
}

class ProfilePage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Ramaiah Chairman Profile'),
        backgroundColor: Colors.blue,
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: [
            CircleAvatar(
              radius: 50,
              backgroundImage:
AssetImage('/home/cselab3/Downloads/ramaiah1.jpg'), // Make sure this
path is correct
            ),
            SizedBox(height: 20),
            Text(
              'Dr. M.S. Ramaiah',
              style: TextStyle(
                fontSize: 24,
                fontWeight: FontWeight.bold,
              ),
            ),
          ],
        ),
      ),
    );
  }
}
```

```

    ),
    SizedBox(height: 10),
    Text(
      'Founder Chairman',
      style: TextStyle(
        fontSize: 18,
        fontWeight: FontWeight.w500,
      ),
    ),
  ),
  SizedBox(height: 20),
  Padding(
    padding: const EdgeInsets.all(16.0),
    child: Text(
      'Mathikere Sampangi Ramaiah was born on 20\n April 1922,
in Madhugiri to Sampangappa and\n Narasamma.',
      textAlign: TextAlign.center,
      style: TextStyle(fontSize: 16),
    ),
  ),
),
),
],
),
),

// Add background color for the entire scaffold
);
}
}

```



Dr. M.S. Ramaiah

Founder Chairman

Mathikere Sampangi Ramaiah was born on 20 April 1922, in Madhugiri to Sampangappa and Narasamma.

PROGRAM 9

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: MyHomePage(),
    );
  }
}

class MyHomePage extends StatelessWidget {
  void _showAlertDialog(BuildContext context) {
    showDialog(
      context: context,
      builder: (BuildContext context) {
        return AlertDialog(
          title: Text("Alert Dialog"),
          content: Text("This is a basic alert dialog."),
          actions: <Widget>[
            TextButton(
              child: Text("Close"),
              onPressed: () {
                Navigator.of(context).pop();
              },
            ),
          ],
        );
      },
    );
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text("Flutter Alert Dialog Example"),
      ),
      body: Center(
```

```
child: ElevatedButton(  
  onPressed: () {  
    _showAlertDialog(context);  
  },  
  child: Text("Show Alert Dialog"),  
),  
),  
);  
}  
}
```

Flutter Alert Dialog Example

DEBUG

Alert Dialog

This is a basic alert dialog.

Close

PROGRAM 10

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: MyHomePage(),
    );
  }
}

class MyHomePage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text("Flutter Icons Example"),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            Icon(
              Icons.star,
              size: 100.0,
              color: Colors.yellow,
            ),
            Text("Star Icon", style: TextStyle(fontSize: 20.0)),
            SizedBox(height: 20.0),
            Icon(
              Icons.favorite,
              size: 100.0,
              color: Colors.red,
            ),
            Text("Favorite Icon", style: TextStyle(fontSize: 20.0)),
            SizedBox(height: 20.0),
            Icon(
              Icons.local_florist,
```

```
        size: 100.0,  
        color: Colors.green,  
      ),  
      Text("Florist Icon", style: TextStyle(fontSize: 20.0)),  
    ],  
  ),  
),  
);  
}  
}
```


Flutter Icons Example

DEBUG



Star Icon



Favorite Icon



Florist Icon

PROGRAM 11

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: MyHomePage(),
    );
  }
}

class MyHomePage extends StatelessWidget {
  final List<String> items = [
    'Item 1',
    'Item 2',
    'Item 3',
    'Item 4',
    'Item 5',
  ];

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text("Flutter List Example"),
      ),
      body: ListView.builder(
        itemCount: items.length,
        itemBuilder: (BuildContext context, int index) {
          return ListTile(
            title: Text(items[index]),
          );
        },
      ),
    );
  }
}
```

Flutter List Example

DEBUG

Item 1

Item 2

Item 3

Item 4

Item 5

PROGRAM 12

```
import 'package:flutter/material.dart';

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      theme: ThemeData(
        scaffoldBackgroundColor: Colors.black, // Set background color
        to black
        primaryColor: Colors.yellow, // Set text color to yellow
      ),
      home: MyHomePage(),
    );
  }
}

class MyHomePage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Flutter Theme Example'),
      ),
      body: Center(
        child: Text(
          'Welcome to Flutter Themes',
          style: TextStyle(
            fontSize: 24,
            color: Colors.yellow, // Set text color explicitly
          ),
        ),
      ),
    );
  }
}
```

Flutter Theme Example

DEBUG

Welcome to Flutter Themes

PROGRAM 13

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatefulWidget {
  @override
  _MyAppState createState() => _MyAppState();
}

class _MyAppState extends State<MyApp> {
  String _displayText = '';

  void _handleButtonClick() {
    setState(() {
      _displayText = "refusing to restart...\n"
                    "Initializing in 65s;\n"
                    "Button Clicked";
    });
  }

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'TextButton Example',
      home: Scaffold(
        appBar: AppBar(
          title: Text('Exercise-03'),
        ),
        body: Padding(
          padding: const EdgeInsets.all(32.0),
          child: Row(
            crossAxisAlignment: CrossAxisAlignment.start,
            children: [ // Left column with button
              Container(
                width: 200,
                decoration: BoxDecoration(
                  border: Border.all(),
                ),
                child: Column(
                  mainAxisAlignment: MainAxisAlignment.start,
```

```

        children: [
          Container(
            width: double.infinity,
            color: Colors.blue[200],
            padding: EdgeInsets.all(8),
            child: Text('TextButton Example'),
          ),
          SizedBox(height: 50),
          TextButton(
            onPressed: _handleButtonClick,
            child: Text('Click Me'),
          ),
        ],
      ),
    ),
    SizedBox(width: 50),
    // Right side text display
    if (_displayText.isNotEmpty)
      Container(
        padding: EdgeInsets.all(10),
        color: Colors.black87,
        child: Text(
          _displayText,
          style: TextStyle(
            color: Colors.white,
            fontFamily: 'Courier',
          ),
        ),
      ),
    ],
  ),
),
),
),
);
}
}

```

TextButton Example

Click Me

refusing to restart...
Initializing in 65s;
Button Clicked

PROGRAM 14

```
import 'package:flutter/material.dart';

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'ElevatedButton Example',
      theme: ThemeData(
        primarySwatch: Colors.blue,
      ),
      home: ElevatedButtonExample(),
      debugShowCheckedModeBanner: false,
    );
  }
}

class ElevatedButtonExample extends StatefulWidget {
  @override
  _ElevatedButtonExampleState createState() => _ElevatedButtonExampleState();
}

class _ElevatedButtonExampleState extends State<ElevatedButtonExample> {
  bool showTerminal = false;

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      backgroundColor: Colors.grey[100],
      body: Row(
        children: [
          // Left panel - Main content
          Container(
            width: 400,
            height: double.infinity,
            color: Colors.white,
            child: Column(
              children: [
                // Header with blue background
                Container(
```

```

width: double.infinity,
padding: EdgeInsets.symmetric(horizontal: 16, vertical: 12),
decoration: BoxDecoration(
  gradient: LinearGradient(
    colors: [Colors.blue[600]!, Colors.teal[400]!],
    begin: Alignment.centerLeft,
    end: Alignment.centerRight,
  ),
),
child: Row(
  children: [
    // Bullet point
    Container(
      width: 6,
      height: 6,
      decoration: BoxDecoration(
        color: Colors.white,
        shape: BoxShape.circle,
      ),
      margin: EdgeInsets.only(right: 12),
    ),
    Text(
      'ElevatedButton Example',
      style: TextStyle(
        color: Colors.white,
        fontSize: 16,
        fontWeight: FontWeight.w500,
      ),
    ),
    Spacer(),
    // Small icon in corner
    Container(
      width: 20,
      height: 20,
      decoration: BoxDecoration(
        color: Colors.white.withOpacity(0.3),
        borderRadius: BorderRadius.circular(3),
      ),
      child: Icon(
        Icons.code,
        size: 12,
        color: Colors.white,
      ),
    ),
  ],
),

```

```

    ),

    // Content area
    Expanded(
      child: Padding(
        padding: EdgeInsets.all(24),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            SizedBox(height: 150),

            // Click Me button
            ElevatedButton(
              onPressed: () {
                setState(() {
                  showTerminal = true;
                });
              },
              style: ElevatedButton.styleFrom(
                backgroundColor: Colors.blue[600],
                foregroundColor: Colors.white,
                padding: EdgeInsets.symmetric(horizontal: 24, vertical: 12),
                shape: RoundedRectangleBorder(
                  borderRadius: BorderRadius.circular(6),
                ),
                elevation: 2,
              ),
              child: Text(
                'Click Me',
                style: TextStyle(
                  fontSize: 14,
                  fontWeight: FontWeight.w500,
                ),
              ),
            ),
            Spacer(),
          ],
        ),
      ),
    ),
  ],
),
),
// Right panel - Terminal output

```

```

Expanded(
  child: Container(
    color: Colors.grey[100],
    child: showTerminal
      ? Container(
        margin: EdgeInsets.all(20),
        padding: EdgeInsets.all(16),
        decoration: BoxDecoration(
          color: Colors.black87,
          borderRadius: BorderRadius.circular(4),
          boxShadow: [
            BoxShadow(
              color: Colors.black26,
              blurRadius: 8,
              offset: Offset(0, 4),
            ),
          ],
        ),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          mainAxisAlignment: MainAxisAlignment.min,
          children: [
            Text(
              'A Dart VM Service on Chrome is available at: http://127.0.0.0',
              style: TextStyle(
                color: Colors.lightGreen,
                fontSize: 12,
                fontFamily: 'monospace',
              ),
            ),
            SizedBox(height: 4),
            Text(
              'The Flutter DevTools debugger and profiler on Chrome is ava',
              style: TextStyle(
                color: Colors.lightGreen,
                fontSize: 12,
                fontFamily: 'monospace',
              ),
            ),
            SizedBox(height: 4),
            Text(
              'Button Clicked!',
              style: TextStyle(
                color: Colors.white,
                fontSize: 12,
                fontFamily: 'monospace',
              ),
            ),
          ],
        ),
      )
    ,
  ),
)

```

```

        ),
      ),
      SizedBox(height: 8),
      // Cursor
      Container(
        width: 8,
        height: 14,
        color: Colors.lightGreen,
      ),
    ],
  ),
)
: SizedBox.shrink(),
),
),
],
),
);
}
}

```

OUTPUT

ElevatedButton Example

Click Me

```
A Dart VM Service on Chrome is out  
B0c.vc:7D:2041.21B  
The Fx boots Perrosts debugger and  
That 7o 6 CL!  
Bitton Clickes!
```

PROGRAM 15

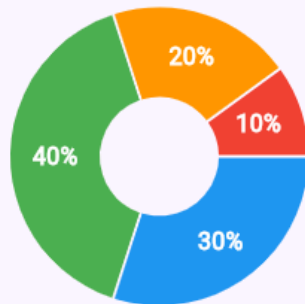
```
import 'package:flutter/material.dart';  
import 'package:fl_chart/fl_chart.dart';  
  
void main() {  
  runApp(MyApp());  
}  
  
class MyApp extends StatelessWidget {  
  @override  
  Widget build(BuildContext context) {  
    return MaterialApp(debugShowCheckedModeBanner: false, home: MyHomePage());  
  }  
}
```

```
}
```

```
class MyHomePage extends StatelessWidget {  
  @override  
  Widget build(BuildContext context) {  
    return Scaffold(  
      appBar: AppBar(  
        title: Text('Flutter Pie Chart Demo'),  
        backgroundColor: Colors.teal,  
      ),  
      body: Center(  
        child: PieChart(  
          PieChartData(  
            sectionsSpace: 2, // space between slices  
            centerSpaceRadius: 40, // empty center space  
            sections: [  
              PieChartSectionData(  
                color: Colors.blue,  
                value: 30,  
                title: '30%',  
                radius: 60,  
                titleStyle: TextStyle(  
                  fontSize: 16,  
                  fontWeight: FontWeight.bold,  
                  color: Colors.white,  
                ),  
              ),  
              PieChartSectionData(  
                color: Colors.green,  
                value: 40,  
                title: '40%',  
                radius: 60,  
                titleStyle: TextStyle(  
                  fontSize: 16,  
                  fontWeight: FontWeight.bold,  
                  color: Colors.white,  
                ),  
              ),  
              PieChartSectionData(  
                color: Colors.orange,  
                value: 20,  
                title: '20%',  
                radius: 60,  
                titleStyle: TextStyle(  
                  fontSize: 16,  
                  fontWeight: FontWeight.bold,
```

```
        color: Colors.white,
      ),
    ),
    PieChartSectionData(
      color: Colors.red,
      value: 10,
      title: '10%',
      radius: 60,
      titleStyle: TextStyle(
        fontSize: 16,
        fontWeight: FontWeight.bold,
        color: Colors.white,
      ),
    ),
  ],
),
),
);
}
```


Flutter Pie Chart Demo



PROGRAM 16

```
import 'package:flutter/material.dart';

void main() => runApp(ThemeExerciseApp());

class ThemeExerciseApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Flutter Themes - Exercise 6',
      debugShowCheckedModeBanner: false,
      home: ThemeExercisePage(),
    );
  }
}
```

```

}
}

class ThemeExercisePage extends StatefulWidget {
  @override
  _ThemeExercisePageState createState() => _ThemeExercisePageState();
}

class _ThemeExercisePageState extends State<ThemeExercisePage> {
  bool _leftOn = false;
  bool _rightOn = true;

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      // overall background similar to projector slide
      backgroundColor: Colors.white,
      body: SafeArea(
        child: Column(
          children: [
            // header banner
            Container(
              width: double.infinity,
              padding: EdgeInsets.symmetric(vertical: 18, horizontal:
16),
              color: Color(0xFF2A68A7), // deep blue
              child: Text(
                'Flutter Themes-Exercise-6',
                style: TextStyle(
                  color: Colors.white,
                  fontSize: 28,
                  fontWeight: FontWeight.w600,
                ),
                textAlign: TextAlign.left,
              ),
            ),
            // main content: two panels with divider
            Expanded(
              child: Row(
                children: [
                  // left panel (light)

```

```

Expanded(
  child: Padding(
    padding: const EdgeInsets.all(24.0),
    child: Container(
      decoration: BoxDecoration(
        color: Colors.white,
        border: Border.all(color: Colors.transparent),
        boxShadow: [
          BoxShadow(
            color: Colors.black12,
            blurRadius: 8,
            offset: Offset(0, 3),
          )
        ],
      ),
      child: Column(
        children: [
          // small "appbar" strip
          Container(
            height: 28,
            color: Color(0xFF1E73B8),
            alignment: Alignment.centerLeft,
            padding: EdgeInsets.symmetric(horizontal:
8),

            child: Text(
              'Flutter Theme Demo',
              style: TextStyle(
                color: Colors.white70, fontSize:
12),

            ),
          ),
          // content area
          Expanded(
            child: Center(
              child: Column(
                mainAxisAlignment: MainAxisAlignment.min,
                children: [
                  Text('Toggle Theme',
                    style: TextStyle(
                      color: Colors.black87,
                      fontSize: 14)),
                  SizedBox(height: 8),

```



```
// small "appbar" strip (dark)
Container(
  height: 28,
  color: Colors.black54,
  alignment: Alignment.centerLeft,
  padding: EdgeInsets.symmetric(horizontal:
8),

  child: Text(
    'Flutter Theme Demo',
    style: TextStyle(
      color: Colors.white70, fontSize:
12),

    ),
  ),
// content area
Expanded(
  child: Center(
    child: Column(
      mainAxisAlignment: MainAxisAlignment.min,
      children: [
        Text('Toggle Theme',
          style: TextStyle(
            color: Colors.white70,
            fontSize: 14)),
        SizedBox(height: 8),
        Transform.scale(
          scale: 1.0,
          child: Switch(
            activeColor:
Colors.tealAccent[400],

            value: _rightOn,
            onChanged: (v) =>
              setState(() => _rightOn =
v),

          ),
        ),
      ],
    ),
  ),
)
```

```

        ),
    ),
),
],
),
),

// footer bar
Container(
  width: double.infinity,
  padding: EdgeInsets.symmetric(vertical: 12),
  color: Color(0xFF1E73B8),
  child: Text(
    'Dept. of CS&E, MSRIT',
    style: TextStyle(
      color: Colors.white,
      fontSize: 16,
    ),
    textAlign: TextAlign.center,
  ),
),
],
),
),
);
}
}

```

Flutter Theme Demo

Toggle Theme



Flutter Theme Demo

Toggle Theme

