Experiment 2 (design flutter ui using comman widget)

Hello word code

import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {

// This widget is the root of your application.

@override

Widget build(BuildContext context) {

return MaterialApp(

title: 'Hello World Demo Application',

theme: ThemeData(

primarySwatch: Colors.blue,

),

home: MyHomePage(title: 'Home page'),

);

}

}

class MyHomePage extends StatelessWidget {

MyHomePage({Key? key, required this.title}) : super(key: key);

final String title;

@override

Widget build(BuildContext context) {

return Scaffold(

appBar: AppBar(

title: Text(this.title),

),

body: Center(

child:

Text(

'Hello World',

)

),

);

}

}

College id code

import 'package:flutter/material.dart';

void main() => runApp(MaterialApp(

 home: CollegeIdCard(),

));

class CollegeIdCard extends StatelessWidget {

 @override

 Widget build(BuildContext context) {

   return Scaffold(

     backgroundColor: Colors.white,

     appBar: AppBar(

       title: Text('College ID Card'),

       centerTitle: true,

       backgroundColor: Colors.deepPurple,

       elevation: 0.0,

     ),

     body: Padding(

       padding: const EdgeInsets.fromLTRB(30.0, 40.0, 30.0, 0),

       child: Column(

         crossAxisAlignment: CrossAxisAlignment.start,

         children: <Widget>[

           Center(

             child: CircleAvatar(

               radius: 60.0,

               backgroundImage: AssetImage('img/picc.jpeg'),

             ),

           ),

           Divider(

             color: Colors.grey[800],

             height: 60.0,

           ),

           Text(

             'STUDENT NAME',

             style: TextStyle(

               color: Colors.grey,

               letterSpacing: 2.0,

             ),

           ),

           SizedBox(height: 10.0),

           Text(

             'xyz’,

             style: TextStyle(

               color: Colors.deepPurple,

               fontWeight: FontWeight.bold,

               fontSize: 16.0,

               letterSpacing: 2.0,

             ),

           ),

           SizedBox(height: 30.0),

           Text(

             'COLLEGE ADDRESS',

             style: TextStyle(

               color: Colors.grey,

               letterSpacing: 2.0,

             ),

           ),

           SizedBox(height: 10.0),

           Text(

             'BVCOE Kharghar, Navi Mumbai',

             style: TextStyle(

               color: Colors.deepPurple,

               fontWeight: FontWeight.bold,

               fontSize: 16.0,

               letterSpacing: 2.0,

             ),

           ),

           SizedBox(height: 30.0),

           Text(

             'CURRENT ACADEMIC YEAR',

             style: TextStyle(

               color: Colors.grey,

               letterSpacing: 2.0,

             ),

           ),

           SizedBox(height: 10.0),

           Text(

             'TE - Information Technology',

             style: TextStyle(

               color: Colors.deepPurple,

               fontWeight: FontWeight.bold,

               fontSize: 16.0,

               letterSpacing: 2.0,

             ),

           ),

           SizedBox(height: 30.0),

           Row(

             children: <Widget>[

               Icon(

                 Icons.email,

                 color: Colors.grey[400],

               ),

               SizedBox(width: 10.0),

               Text(

                 ‘xyz@gmail.com’,

                 style: TextStyle(

                   color: Colors.grey[400],

                   fontSize: 18.0,

                   letterSpacing: 1.0,

                 ),

               )

             ],

           ),

           SizedBox(height: 30.0),

           Row(

             children: <Widget>[

               Icon(

                 Icons.phone,

                 color: Colors.grey[400],

               ),

               SizedBox(width: 10.0),

               Text(

                 '9930524824',

                 style: TextStyle(

                   color: Colors.grey[400],

                   fontSize: 18.0,

                   letterSpacing: 1.0,

                 ),

               )

             ],

           ),

           Divider(

             color: Colors.grey[800],

             height: 60.0,

           ),

           Text(

             'Student Address',

             style: TextStyle(

               color: Colors.grey,

               letterSpacing: 2.0,

             ),

           ),

           SizedBox(height: 5.0),

           Text(

             'C5/702,BuddhaDev Vihar,Opp. Hill garden,'

                 'Nr. Tikujiniwadi,Thane-(W)'

                 'Maharashtra-400610',

             style: TextStyle(

               color: Colors.grey,

               fontWeight: FontWeight.bold,

               fontSize: 16.0,

               letterSpacing: 2.0,

             ),

           ),

           Divider(

             color: Colors.grey[800],

             height: 60.0,

           ),

         ],

       ),

     ),

   );

 }

}

Experiment 3 (layout offlutter using widgets)

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

**void** main() => runApp(MyApp());

**class** MyApp **extends** StatelessWidget {

  @override

  Widget build(BuildContext context) {

**final** appTitle = 'Flutter Form Demo';

**return** MaterialApp(

      title: appTitle,

      home: Scaffold(

        appBar: AppBar(

          title: Text(appTitle),

        ),

        body: MyCustomForm(),

      ),

    );

  }

}

// Create a Form widget.

**class** MyCustomForm **extends** StatefulWidget {

  @override

  MyCustomFormState createState() {

**return** MyCustomFormState();

  }

}

// Create a corresponding State class. This class holds data related to the form.

**class** MyCustomFormState **extends** State<MyCustomForm> {

  // Create a global key that uniquely identifies the Form widget

  // and allows validation of the form.

**final** \_formKey = GlobalKey<FormState>();

  @override

  Widget build(BuildContext context) {

    // Build a Form widget using the \_formKey created above.

**return** Form(

      key: \_formKey,

      child: Column(

        crossAxisAlignment: CrossAxisAlignment.start,

        children: <Widget>[

          TextFormField(

            decoration: **const** InputDecoration(

              icon: **const** Icon(Icons.person),

              hintText: 'Enter your name',

              labelText: 'Name',

            ),

          ),

          TextFormField(

            decoration: **const** InputDecoration(

              icon: **const** Icon(Icons.phone),

              hintText: 'Enter a phone number',

              labelText: 'Phone',

            ),

          ),

          TextFormField(

            decoration: **const** InputDecoration(

            icon: **const** Icon(Icons.calendar\_today),

            hintText: 'Enter your date of birth',

            labelText: 'Dob',

            ),

           ),

**new** Container(

              padding: **const** EdgeInsets.only(left: 150.0, top: 40.0),

              child: **new** RaisedButton(

                child: **const** Text('Submit'),

                  onPressed: **null**,

              )),

        ],

      ),

    );

  }

}

Experiment 4 (layout of flutter app using layout widget)

1st app code

import 'dart:ui';

import 'package:flutter/material.dart';

void main() => runApp(const MyApp());

class MyApp extends StatelessWidget {

  const MyApp({Key? key}) : super(key: key);

  static const String \_title = 'Flutter Tutorial';

  @override

  Widget build(BuildContext context) {

    return MaterialApp(

      title: \_title,

      home: Scaffold(

        appBar: AppBar(title: const Text(\_title)),

        body: const MyStatefulWidget(),

      ),

    );

  }

}

class MyStatefulWidget extends StatefulWidget {

  const MyStatefulWidget({Key? key}) : super(key: key);

  @override

  State<MyStatefulWidget> createState() => \_MyStatefulWidgetState();

}

class \_MyStatefulWidgetState extends State<MyStatefulWidget> {

  @override

  Widget build(BuildContext context) {

    return Center(

        child: GridView(

      gridDelegate: const SliverGridDelegateWithFixedCrossAxisCount(

        crossAxisCount: 3,

      ),

      primary: false,

      padding: const EdgeInsets.all(20),

      children: <Widget>[

        Container(

          padding: const EdgeInsets.all(8),

          child: const Text("I"),

          color: Colors.orange[200],

        ),

        Container(

          padding: const EdgeInsets.all(8),

          child: const Text("am the"),

          color: Colors.green[200],

        ),

        Container(

          padding: const EdgeInsets.all(8),

          child: const Text("Student Of"),

          color: Colors.red[200],

        ),

        Container(

          padding: const EdgeInsets.all(8),

          child: const Text("BHARATI VIDYAPEETH"),

          color: Colors.purple[200],

        ),

        Container(

          padding: const EdgeInsets.all(8),

          child: const Text("COLLAGE OF ENGINEERING"),

          color: Colors.blueGrey[200],

        ),

        Container(

          padding: const EdgeInsets.all(12),

          child: const Text("INFORAMTION TECHNOLOGY"),

          color: Colors.yellow[200],

        ),

      ],

    ));

  }

}

2nd app code

Create file demo\_page.dart in lib folder and paste this code

import 'package:flutter/material.dart';

class ColumnDemo extends StatelessWidget {

  @override

  Widget build(BuildContext context) {

    return Scaffold(

      backgroundColor: Colors.blueAccent,

      body: SafeArea(

        child: Center(

          child: Card(

            elevation: 12,

            shape: RoundedRectangleBorder(

              borderRadius: BorderRadius.circular(24),

            ),

            color: Colors.white,

            child: Padding(

              padding: const EdgeInsets.all(32.0),

              child: Column(

                mainAxisSize: MainAxisSize.min,

                children: <Widget>[

                  FlutterLogo(size: 48),

                  SizedBox(

                    height: 16,

                  ),

                  Column(

                    crossAxisAlignment: CrossAxisAlignment.start,

                    children: <Widget>[

                      Text(

                        'Title of the Card',

                        style: Theme.of(context).textTheme.headline5,

                      ),

                      Text('Some description',

                          style: Theme.of(context).textTheme.headline6),

                    ],

                  ),

                ],

              ),

            ),

          ),

        ),

      ),

    );

  }

}

class RowDemo extends StatelessWidget {

  @override

  Widget build(BuildContext context) {

    return Scaffold(

      backgroundColor: Colors.blueAccent,

 body: SafeArea(

        child: Center(

          child: Card(

            margin: EdgeInsets.all(16),

            elevation: 12,

            shape: RoundedRectangleBorder(

              borderRadius: BorderRadius.circular(24),

            ),

            color: Colors.white,

            child: Padding(

              padding:

                  const EdgeInsets.symmetric(horizontal: 24.0, vertical: 36),

              child: Row(

                children: <Widget>[

                  FlutterLogo(size: 48),

                  SizedBox(

                    width: 16,

                  ),

                  Expanded(

                    child: Column(

                      crossAxisAlignment: CrossAxisAlignment.start,

                      mainAxisSize: MainAxisSize.min,

                      children: <Widget>[

                        Text(

                          'Title of the Card',

                          style: Theme.of(context).textTheme.headline5,

                        ),

                        Text('Some description',

                            style: Theme.of(context).textTheme.headline6),

                      ],

                    ),

                  ),

                  Icon(

                    Icons.navigate\_next,

                    size: 36,

                  ),

                ],

              ),

            ),

          ),

        ),

      ),

    );

  }

}

class StackDemo extends StatelessWidget {

  @override

  Widget build(BuildContext context) {

    return Scaffold(

      backgroundColor: Colors.blueAccent,

      body: SafeArea(

        child: Center(

          child: Container(

            margin: EdgeInsets.all(16),

            child: Stack(

              children: <Widget>[

                Opacity(

                  opacity: 1,

child: Card(

                    elevation: 12,

                    shape: RoundedRectangleBorder(

                      borderRadius: BorderRadius.circular(24),

                    ),

                    color: Colors.white,

                    child: Padding(

                      padding: const EdgeInsets.symmetric(

                          horizontal: 24.0, vertical: 36),

                      child: Row(

                        mainAxisAlignment: MainAxisAlignment.spaceBetween,

                        children: <Widget>[

                          FlutterLogo(size: 48),

                          SizedBox(

                            width: 16,

                          ),

                          Expanded(

                            child: Column(

                              crossAxisAlignment: CrossAxisAlignment.start,

                              mainAxisSize: MainAxisSize.min,

                              children: <Widget>[

                                Text(

                                  'Title of the Card',

                                  style: Theme.of(context).textTheme.headline5,

                                ),

                                Text('Some description',

                                    style:

                                        Theme.of(context).textTheme.headline6),

                              ],

                            ),

                          ),

                          Icon(

                            Icons.navigate\_next,

                            size: 36,

                          )

                        ],

                      ),

                    ),

                  ),

 ),

                ),

                Positioned(

                  left: 8,

                  top: 8,

                  child: Icon(Icons.star, color: Colors.amber, size: 36),

                ),

                // Positioned.fill(

                //     child: Icon(

                //   Icons.block,

                //   size: 72,

                // )),

              ],

            ),

          ),

        ),

      ),

    );

  }

}

class ContainerDemo extends StatelessWidget {

  @override

  Widget build(BuildContext context) {

    return Scaffold(

      backgroundColor: Colors.white,

      body: SafeArea(

        child: Center(

          child: Container(

            margin: EdgeInsets.all(16),

            child: Stack(

              children: <Widget>[

                Card(

                  elevation: 12,

                  shape: RoundedRectangleBorder(

                    borderRadius: BorderRadius.circular(24),

                  ),

                  color: Colors.white,

                  child: Container(

                    padding: const EdgeInsets.symmetric(

                        horizontal: 24.0, vertical: 36),

                    decoration: BoxDecoration(

                      borderRadius: BorderRadius.circular(12),

                      gradient: LinearGradient(

                          begin: Alignment.topCenter,

                          end: Alignment.bottomCenter,

                          colors: [Color(0xFF213B6C), Color(0xFF0059A5)]),

                      boxShadow: [

                        BoxShadow(

                            color: Colors.pink,

                            blurRadius: 12,

                            offset: Offset(3, 12)),

],

                    ),

                    child: Row(

                      mainAxisAlignment: MainAxisAlignment.spaceBetween,

                      children: <Widget>[

                        FlutterLogo(size: 48),

                        SizedBox(

                          width: 16,

                        ),

                        Expanded(

                          child: Column(

                            crossAxisAlignment: CrossAxisAlignment.start,

                            mainAxisSize: MainAxisSize.min,

                            children: <Widget>[

                              Text(

                                'Title of the Card',

                                style: Theme.of(context)

                                    .textTheme

                                    .headline5

                                    .copyWith(color: Colors.white),

                              ),

                              Text('Some description',

                                  style: Theme.of(context)

                                      .textTheme

                                      .headline6

                                      .copyWith(color: Colors.white)),

                            ],

                          ),

                        ),

                        Icon(

                          Icons.navigate\_next,

                          size: 36,

                          color: Colors.white,

                        )

                      ],

                    ),

                  ),

                ),

                Positioned(

                  left: 8,

                  top: 8,

                  child: Icon(

                    Icons.star,

                    size: 32,

                    color: Colors.deepOrangeAccent,

                  ),

                ),

              ],

            ),

          ),

        ),

      ),

 );

  }

}

class ListDemo extends StatelessWidget {

  @override

  Widget build(BuildContext context) {

    return Scaffold(

      body: SafeArea(

        child: ListView.builder(

            itemCount: 5,

            itemBuilder: (context, index) {

              return Container(

                margin: EdgeInsets.all(16),

                child: Stack(

                  children: <Widget>[

                    Card(

                      elevation: 12,

                      shape: RoundedRectangleBorder(

                        borderRadius: BorderRadius.circular(24),

                      ),

                      color: Colors.white,

                      child: Container(

                        padding: const EdgeInsets.symmetric(

                            horizontal: 24.0, vertical: 36),

                        decoration: BoxDecoration(

                          borderRadius: BorderRadius.circular(24),

                          gradient: LinearGradient(

                              colors: [Color(0xFF213B6C), Color(0xFF0059A5)]),

                        ),

                        child: Row(

                          mainAxisAlignment: MainAxisAlignment.spaceBetween,

                          children: <Widget>[

                            FlutterLogo(size: 48),

                            SizedBox(

                              width: 16,

                            ),

                            Expanded(

                              child: Column(

                                crossAxisAlignment: CrossAxisAlignment.start,

                                mainAxisSize: MainAxisSize.min,

                                children: <Widget>[

                                  Text(

                                    'Title of the Card',

                                    style: Theme.of(context)

                                        .textTheme

                                        .headline5

                                        .copyWith(color: Colors.white),

                                  ),

                                  Text

),

                  ],

                ),

              );

            }),

      ),

    );

  }

}

Inside main dart paste this code

import 'package:flutter/material.dart';

import 'package:super\_app/demo\_page.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {

  // This widget is the root of your application.

  @override

  Widget build(BuildContext context) {

    return MaterialApp(

      title: 'Flutter Demo',

      theme: ThemeData(

        primarySwatch: Colors.blue,

      ),

      home: ListDemo(),

      debugShowCheckedModeBanner: false,

    );

  }

}

Experiment 5 (include icons, widgets image,charts in flutter app)

import 'package:flutter/material.dart';

void main() => runApp(const MyApp());

class MyApp extends StatelessWidget {

  const MyApp({Key? key}) : super(key: key);

  static const String \_title = 'Harshada Patil';

  @override

  Widget build(BuildContext context) {

    return MaterialApp(

      title: \_title,

      home: Scaffold(

        appBar: AppBar(title: const Text(\_title)),

        body: const MyStatefulWidget(),

      ),

    );

  }

}

class MyStatefulWidget extends StatefulWidget {

  const MyStatefulWidget({Key? key}) : super(key: key);

  @override

  State<MyStatefulWidget> createState() => \_MyStatefulWidgetState();

}

class \_MyStatefulWidgetState extends State<MyStatefulWidget> {

  @override

  Widget build(BuildContext context) {

    return Center(

      child: Column(

        children: <Widget>[

          Container(

//child: const Text("ROLLNO 52"),

            margin: const EdgeInsets.all(20),

            child: const Image(

              image: NetworkImage('img2.jpg'),

            ),

          ),

        ],

      ),

    );

  }

}

experiment 6 (apply navigation routing and gesture in flutter app)

import 'package:flutter/material.dart';

void main() {

  runApp(const MyApp());

}

class MyApp extends StatelessWidget {

  const MyApp({Key? key}) : super(key: key);

  // This widget is the root of your application.

  @override

  Widget build(BuildContext context) {

    return MaterialApp(

      title: 'Flutter Demo',

      theme: ThemeData(

        // This is the theme of your application.

        //

        // Try running your application with "flutter run". You'll see the

        // application has a blue toolbar. Then, without quitting the app, try

        // changing the primarySwatch below to Colors.green and then invoke

        // "hot reload" (press "r" in the console where you ran "flutter run",

        // or simply save your changes to "hot reload" in a Flutter IDE).

        // Notice that the counter didn't reset back to zero; the application

        // is not restarted.

        primarySwatch: Colors.blue,

      ),

      home: const MyHomePage(title: 'Flutter Demo Home Page'),

    );

  }

}

class MyHomePage extends StatefulWidget {

  const MyHomePage({Key? key, required this.title}) : super(key: key);

  // This widget is the home page of your application. It is stateful, meaning

  // that it has a State object (defined below) that contains fields that affect

  // how it looks.

  // This class is the configuration for the state. It holds the values (in this

  // case the title) provided by the parent (in this case the App widget) and

// used by the build method of the State. Fields in a Widget subclass are

  // always marked "final".

  final String title;

  @override

  State<MyHomePage> createState() => \_MyHomePageState();

}

class \_MyHomePageState extends State<MyHomePage> {

  int \_counter = 0;

  void \_incrementCounter() {

    setState(() {

      // This call to setState tells the Flutter framework that something has

      // changed in this State, which causes it to rerun the build method below

      // so that the display can reflect the updated values. If we changed

      // \_counter without calling setState(), then the build method would not be

      // called again, and so nothing would appear to happen.

      \_counter++;

    });

  }

  @override

  Widget build(BuildContext context) {

    // This method is rerun every time setState is called, for instance as done

    // by the \_incrementCounter method above.

    //

    // The Flutter framework has been optimized to make rerunning build methods

    // fast, so that you can just rebuild anything that needs updating rather

    // than having to individually change instances of widgets.

    return Scaffold(

      appBar: AppBar(

        // Here we take the value from the MyHomePage object that was created by

        // the App.build method, and use it to set our appbar title.

        title: Text(widget.title),

      ),

      body: Center(

        // Center is a layout widget. It takes a single child and positions it

        // in the middle of the parent.

        child: Column(

          // Column is also a layout widget. It takes a list of children and

          // arranges them vertically. By default, it sizes itself to fit its

          // children horizontally, and tries to be as tall as its parent.

          //

          // Invoke "debug painting" (press "p" in the console, choose the

          // "Toggle Debug Paint" action from the Flutter Inspector in Android

          // Studio, or the "Toggle Debug Paint" command in Visual Studio Code

// Studio, or the "Toggle Debug Paint" command in Visual Studio Code)

          // to see the wireframe for each widget.

          //

          // Column has various properties to control how it sizes itself and

          // how it positions its children. Here we use mainAxisAlignment to

          // center the children vertically; the main axis here is the vertical

          // axis because Columns are vertical (the cross axis would be

          // horizontal).

          mainAxisAlignment: MainAxisAlignment.center,

          children: <Widget>[

            const Text(

              'You have pushed the button this many times:',

            ),

            Text(

              '$\_counter',

              style: Theme.of(context).textTheme.headline4,

            ),

          ],

        ),

      ),

      floatingActionButton: FloatingActionButton(

        onPressed: \_incrementCounter,

        tooltip: 'Increment',

        child: const Icon(Icons.add),

      ), // This trailing comma makes auto-formatting nicer for build methods.

    );

  }

}

Or

import 'package:flutter/material.dart';

void main() {

  runApp(MaterialApp(

    title: 'Flutter Navigation',

    theme: ThemeData(

      // This is the theme of your application.

      primarySwatch: Colors.green,

    ),

    home: FirstRoute(),

  ));

}

class FirstRoute extends StatelessWidget {

  @override

  Widget build(BuildContext context) {

    return Scaffold(

      appBar: AppBar(

        title: Text('First Screen'),

      ),

      body: Center(

        child: RaisedButton(

          child: Text('Click Here'),

          color: Colors.orangeAccent,

          onPressed: () {

            Navigator.push(

              context,

              MaterialPageRoute(builder: (context) => SecondRoute()),

            );

          },

        ),

      ),

    );

  }

}

class SecondRoute extends StatelessWidget {

  @override

  Widget build(BuildContext context) {

    return Scaffold(

      appBar: AppBar(

        title: Text("Second Screen"),

      ),

      body: Center(

        child: RaisedButton(

          color: Colors.blueGrey,

          onPressed: () {

            Navigator.pop(context);

          },

          child: Text('Go back'),

        ),

      ),

    );

  }

}  \