

LAB-9

SMART DEVICE PROGRAMMING



Name: Shrey K. Naik

Roll No.: CE073

Batch: A4

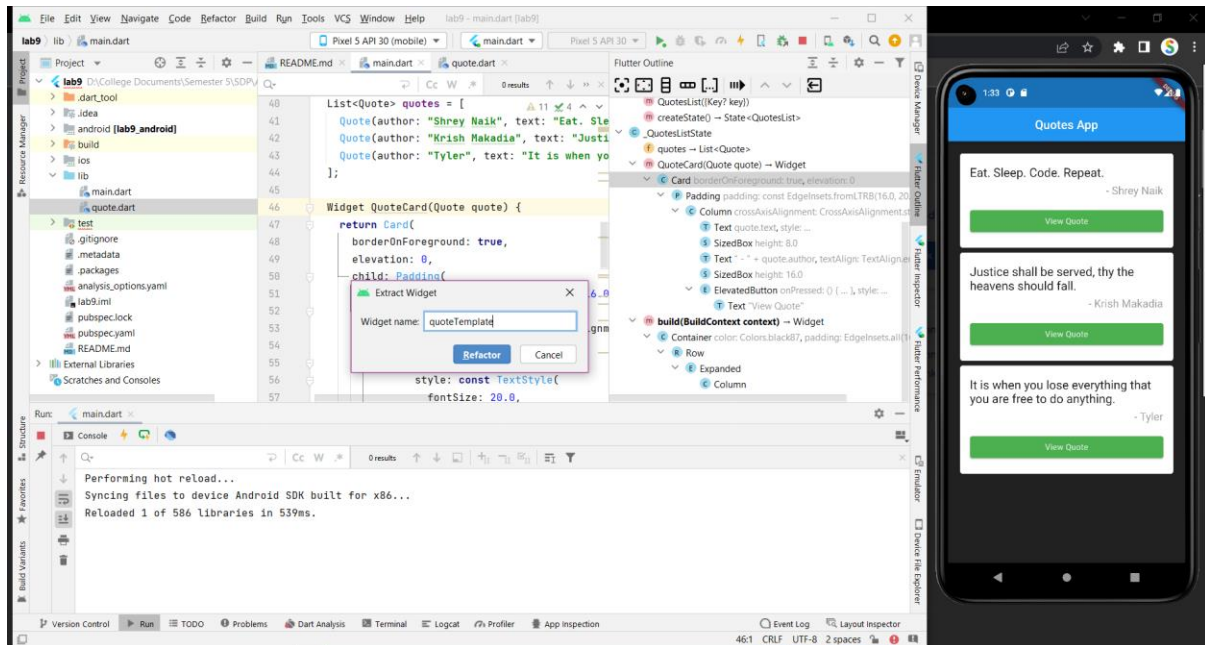
ID: 20CEUOG036

GIT REPO:

https://github.com/naikshrey2308/CE073_SDP_Labs

TUTORIAL-1

Code Test 1:



main.dart

```
import "package:flutter/material.dart";
import "package:lab9/quote.dart";
import "package:lab9/quoteTemplate.dart";

void main() {
  runApp(MaterialApp(
    home: QuotesMain(),
  ));
}

class QuotesMain extends StatefulWidget {
  const QuotesMain({Key? key}) : super(key: key);

  @override
  State<QuotesMain> createState() => _QuotesMainState();
}

class _QuotesMainState extends State<QuotesMain> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text("Quotes App"),
        centerTitle: true,
      ),
      body: QuotesList(),
    );
  }
}
```

```

class QuotesList extends StatefulWidget {
  const QuotesList({Key? key}) : super(key: key);

  @override
  State<QuotesList> createState() => _QuotesListState();
}

class _QuotesListState extends State<QuotesList> {

  List<Quote> quotes = [
    Quote(author: "Shrey Naik", text: "Eat. Sleep. Code. Repeat."),
    Quote(author: "Krish Makadia", text: "Justice shall be served, thy the
heavens should fall."),
    Quote(author: "Tyler", text: "It is when you lose everything that you
are free to do anything."),
  ];

  Widget QuoteCard(Quote quote) {
    return quoteTemplate(quote: quote,);
  }

  @override
  Widget build(BuildContext context) {
    return Container(
      color: Colors.black87,
      padding: EdgeInsets.all(16.0),
      child: Row(
        children: [
          Expanded(
            child: Column(
              children: quotes.map((quote) => quoteTemplate(quote:
quote)).toList(),
            ),
          ),
        ],
      ),
    );
  }
}

```

quoteTemplate.dart

```

import "package:flutter/material.dart";
import 'package:lab9/quote.dart';

class quoteTemplate extends StatelessWidget {
  quoteTemplate({required this.quote});

  final Quote quote;

  @override
  Widget build(BuildContext context) {
    return Card(
      borderOnForeground: true,
      elevation: 0,
      child: Padding(
        padding: const EdgeInsets.fromLTRB(16.0, 20.0, 16.0, 20.0),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.stretch,
          children: [

```

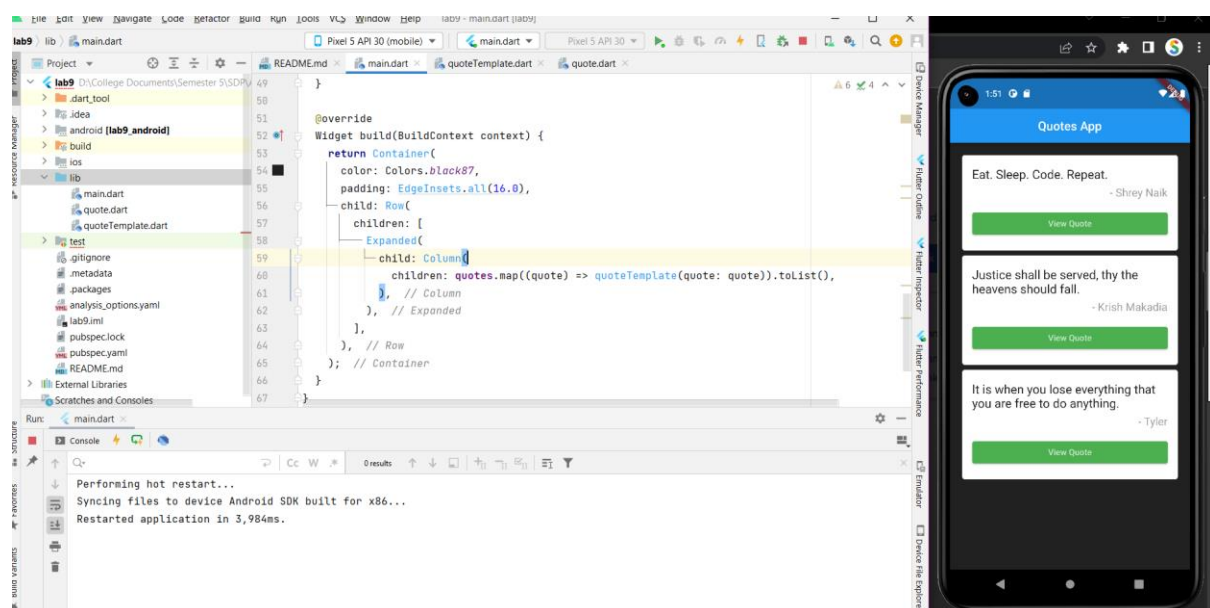
```

        Text(quote.text,
            style: const TextStyle(
                fontSize: 20.0,
            ),
        ),
        SizedBox(height: 8.0),
        Text("- " + quote.author,
            textAlign: TextAlign.end,
            style: const TextStyle(
                fontSize: 18.0,
                color: Colors.grey,
            ),
        ),
        SizedBox(height: 16.0),
        ElevatedButton(
            onPressed: () {
                print("${quote.text} quote pressed!");
            },
            style: ElevatedButton.styleFrom(
                primary: Colors.green,
                onPressed: Colors.white70,
            ),
            child: Text("View Quote"),
        )
    ],
),
),
);
}
}

```

quote.dart

```
class Quote {
    Quote({this.text = '', this.author = ''});
    String text;
    String author;
}
```



Code Test 2:quotesTemplate.dart

```

import "package:flutter/material.dart";
import 'package:lab9/quote.dart';

class quoteTemplate extends StatelessWidget {
  quoteTemplate({required this.quote, required this.delete});

  final Quote quote;

  final VoidCallback delete;

  @override
  Widget build(BuildContext context) {
    return Card(
      borderOnForeground: true,
      elevation: 0,
      child: Padding(
        padding: const EdgeInsets.fromLTRB(16.0, 20.0, 16.0, 20.0),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.stretch,
          children: [
            Text(quote.text,
              style: const TextStyle(
                fontSize: 20.0,
              ),
            ),
            SizedBox(height: 8.0),
            Text("- " + quote.author,
              textAlign: TextAlign.end,
              style: const TextStyle(
                fontSize: 18.0,
                color: Colors.grey,
              ),
            ),
            SizedBox(height: 16.0),
            ElevatedButton(
              onPressed: delete,
              style: ElevatedButton.styleFrom(
                primary: Colors.green,
                onPrimary: Colors.white70,
              ),
              child: Text("Delete Quote"),
            )
          ]
        ),
      ),
    );
  }
}

```

main.dart

```

import "package:flutter/material.dart";
import "package:lab9/quote.dart";
import 'package:lab9/quoteTemplate.dart';

```

```
void main() {
  runApp(MaterialApp(
    home: QuotesMain(),
  ));
}

class QuotesMain extends StatefulWidget {
  const QuotesMain({Key? key}) : super(key: key);

  @override
  State<QuotesMain> createState() => _QuotesMainState();
}

class _QuotesMainState extends State<QuotesMain> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text("Quotes App"),
        centerTitle: true,
      ),
      body: QuotesList(),
    );
  }
}

class QuotesList extends StatefulWidget {
  const QuotesList({Key? key}) : super(key: key);

  @override
  State<QuotesList> createState() => _QuotesListState();
}

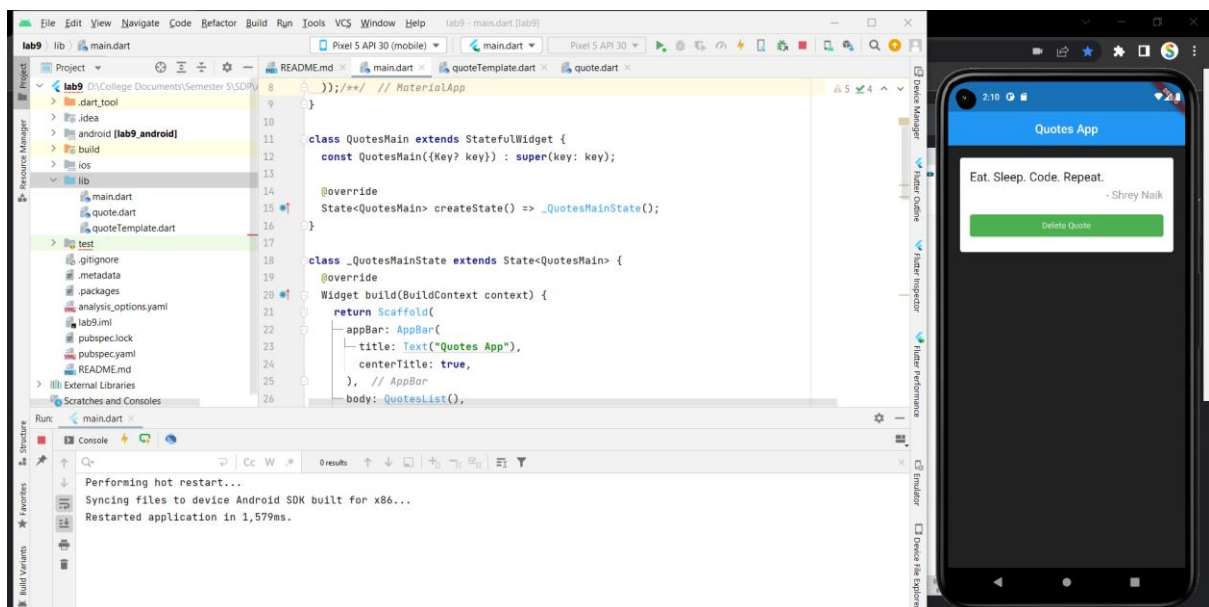
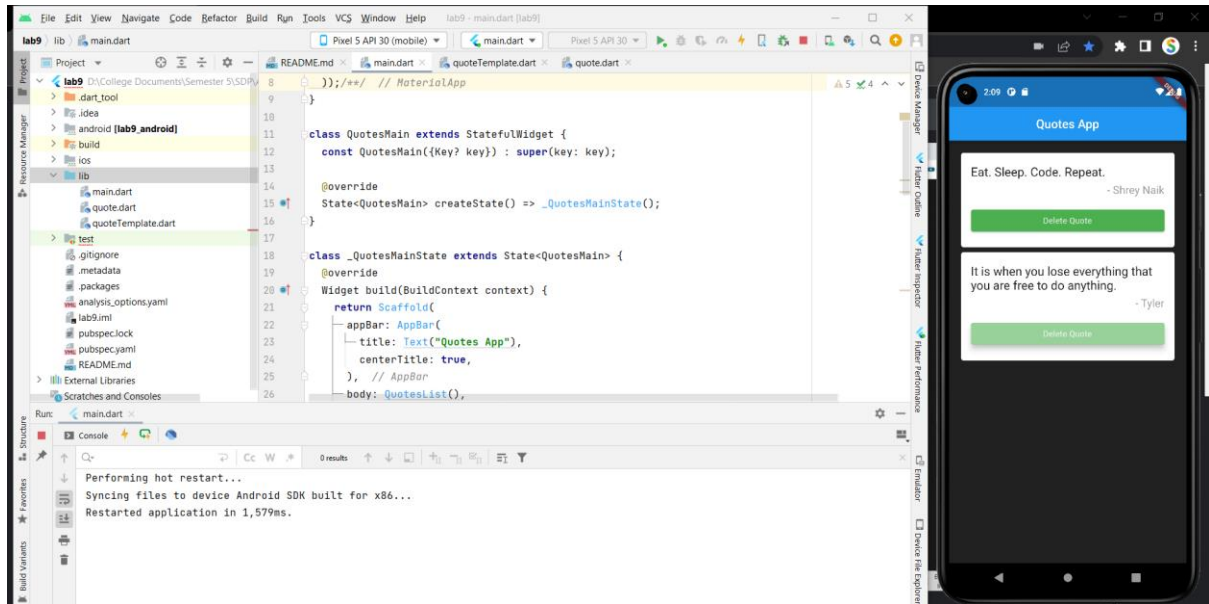
class _QuotesListState extends State<QuotesList> {
  List<Quote> quotes = [
    Quote(author: "Shrey Naik", text: "Eat. Sleep. Code. Repeat."),
    Quote(author: "Krish Makadia", text: "Justice shall be served, thy the heavens should fall."),
    Quote(author: "Tyler", text: "It is when you lose everything that you are free to do anything."),
  ];

  @override
  Widget build(BuildContext context) {
    return Container(
      color: Colors.black87,
      padding: EdgeInsets.all(16.0),
      child: Row(
        children: [
          Expanded(
            child: Column(
              children: quotes.map((quote) => quoteTemplate(
                quote: quote,
                delete: () {
                  setState(() {
                    quotes.remove(quote);
                  });
                }
              )),
            ).toList(),
          ),
        ],
      ),
    );
  }
}
```

```

    },
  ],
),
);
}
}

```



TUTORIAL-2

Code Test 1:

Route widget

- The application's top-level routing table.

- When a named route is pushed with `Navigator.pushNamed()`, the route name is looked up in this map. If the name is present, the associated `widgets.WidgetBuilder()` is used to construct a `MaterialPageRoute` that performs an appropriate transition, including Hero animations, to the new route.
- If the app only has one page, then you can specify it using `home` instead.
- If `home` is specified, then it implies an entry in this table for the `Navigator.defaultRouteName()` route (`/`), and it is an error to redundantly provide such a route in the routes table.
- If a route is requested that is not specified in this table (or by `home`), then the `onGenerateRoute()` callback is called to build the page instead.
- The `Navigator` is only built if routes are provided (either via `home`, `routes`, `onGenerateRoute`, or `onUnknownRoute`); if they are not, builder must not be null.

home.dart

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

class Home extends StatefulWidget {
  const Home({Key? key}) : super(key: key);

  @override
  State<Home> createState() => _HomeState();
}

class _HomeState extends State<Home> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: SafeArea(
        child: Text("HOME SCREEN"),
      ),
    );
  }
}
```

choose location.dart

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

class ChooseLocation extends StatefulWidget {
  const ChooseLocation({Key? key}) : super(key: key);

  @override
  State<ChooseLocation> createState() => _ChooseLocationState();
}

class _ChooseLocationState extends State<ChooseLocation> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: Text("CHOOSE LOCATION SCREEN"),
    );
  }
}
```

loading.dart


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

class Loading extends StatefulWidget {
  const Loading({Key? key}) : super(key: key);

  @override
  State<Loading> createState() => _LoadingState();
}

class _LoadingState extends State<Loading> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: Text("LOADING..."),
    );
  }
}
```

main.dart

```
import "package:flutter/material.dart";
import 'package:lab9/choose_location.dart';
import 'package:lab9/loading.dart';
import "package:lab9/quote.dart";
import 'package:lab9/quoteTemplate.dart';
import 'package:lab9/home.dart';

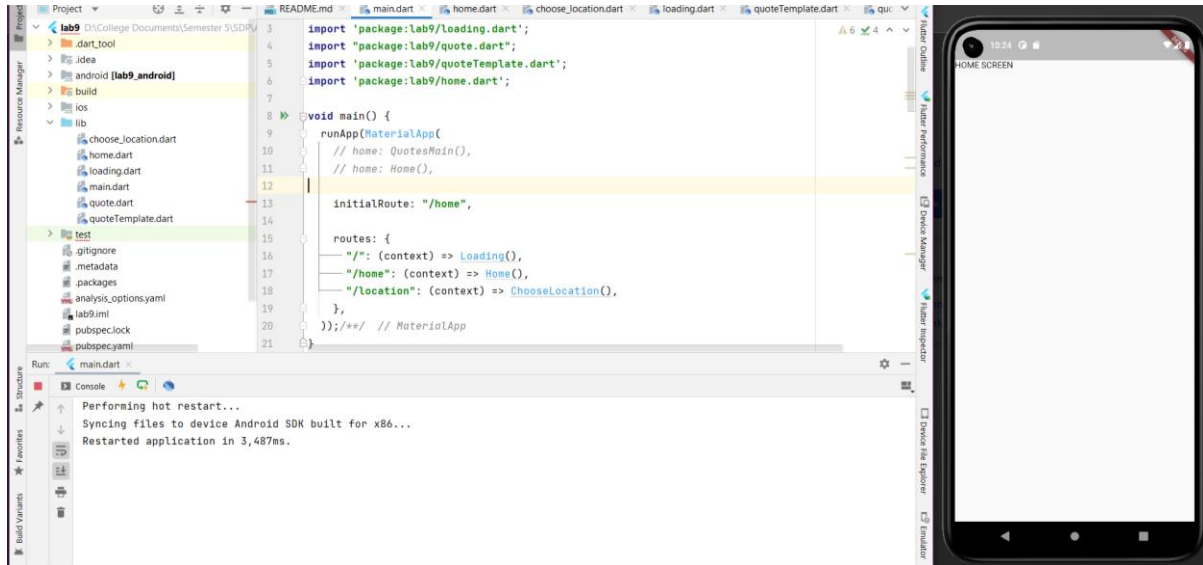
void main() {
  runApp(MaterialApp(
    // home: QuotesMain(),
    // home: Home(),

    initialRoute: "/home",

    routes: {
      "/": (context) => Loading(),
      "/home": (context) => Home(),
      "/location": (context) => ChooseLocation(),
    },
  )); /**/
```

```
}

```



Code Test 2:

Navigation Between The Pages

- The Navigator class provides all the navigation capabilities in a Flutter app.
- Navigator provides methods to mutate the stack by a push to stack or by popping from the stack. The Navigator.push() method is for navigating to a newer page and Navigator.pop() is for going back from the current page.

home.dart

```
body: SafeArea(
  child: Container(
    padding: EdgeInsets.all(8.0),
    child: TextButton.icon(
      onPressed: () {
        Navigator.pushNamed(context, "/location");
      },
      icon: Icon(Icons.edit_location,
        color: Colors.redAccent,
      ),
    ),
  ),
)
```

```
        label: Text("Edit Location",
          style: TextStyle(
            fontSize: 18.0,
            color: Colors.redAccent,
          ),
        ),
      ),
    ),
  ),
),
```

We added a button for choosing location and when that button is clicked we can route to the location page.

choose_location.dart

```
class _ChooseLocationState extends State<ChooseLocation> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text("CHOOSE LOCATION"),
        centerTitle: true,
        backgroundColor: Colors.redAccent,
      ),
      body: SafeArea(child: Text("CHOOSE LOCATION SCREEN")),
    );
  }
}
```

