Name: Kaklotar Gaurav Amarshibhai

Subject: SDP

Batch: A3

Roll No: CE053

ID No: 20CEUBG084

Lab10 Tutorial-2

In this tutorial we will use World Time API.

curl "http://worldtimeapi.org/api/timezone/Asia/Kolkata"

{

"abbreviation": "IST",

"client_ip": "103.26.49.78",

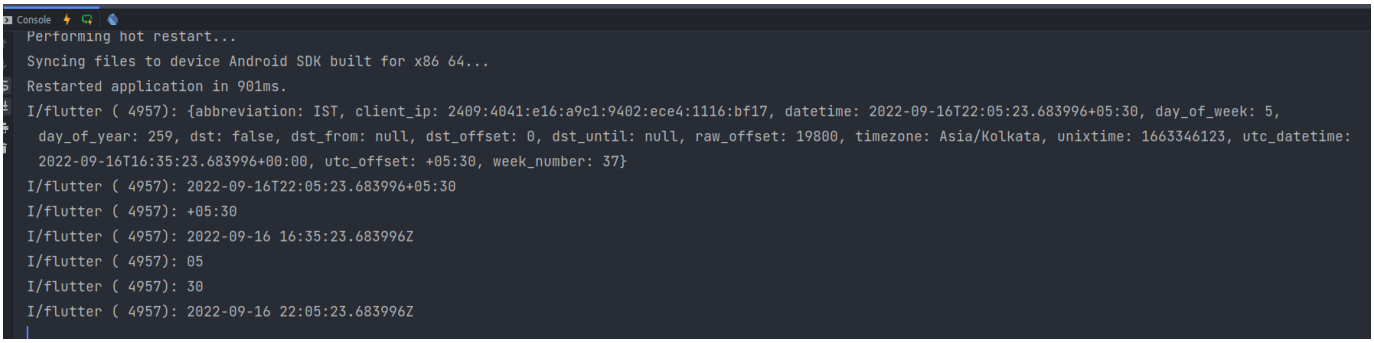
"datetime": "2022-09-12T07:40:37.712499+05:30",

"day_of_week": 1,

2

"day_of_year": 255,

"dst": false,
"dst_from": null,
"dst_offset": 0,
"dst_until": null,
"raw_offset": 19800,
"timezone": "Asia/Kolkata",
"unixtime": 1662948637,
"utc_datetime": "2022-09-12T02:10:37.712499+00:00",
"utc_offset": "+05:30",
"week_number": 37
}

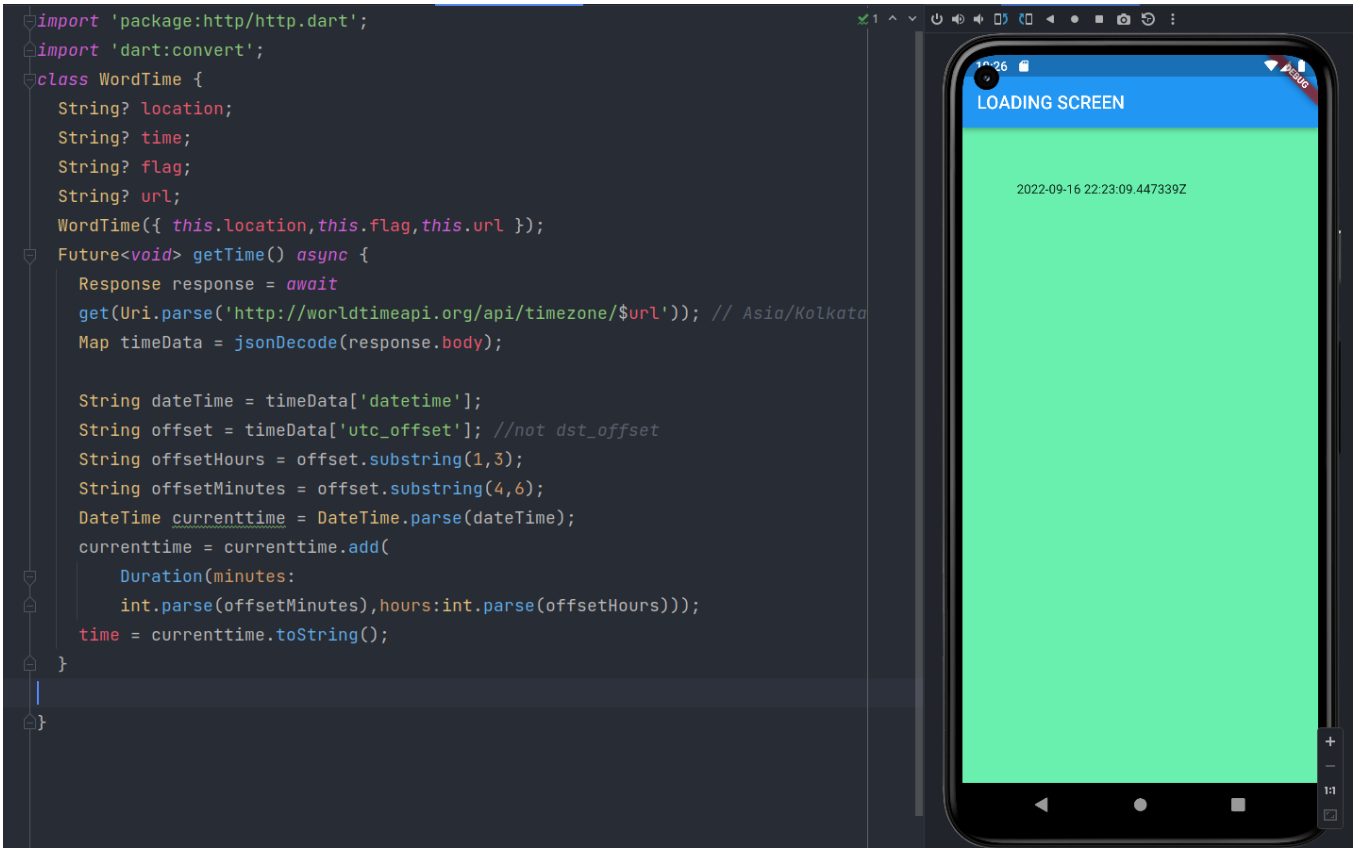


In above code we are using WorldTime API and check details for kolkata.

For London use this link...

https://www.worldtimeapi.org/api/timezone/Europe/London

```
Console
Performing hot restart...
Syncing files to device Android SDK built for x86 64...
Restarted application in 905ms.
I/flutter ( 4957): {abbreviation: BST, client_ip: 2409:4041:e16:a9c1:9402:ece4:1116:bf17, datetime: 2022-09-16T17:40:22.402963+01:00, day_of_week: 5,
 day_of_year: 259, dst: true, dst_from: 2022-03-27T01:00:00+00:00, dst_offset: 3600, dst_until: 2022-10-30T01:00:00+00:00, raw_offset: 0, timezone:
 Europe/London, unixtime: 1663346422, utc_datetime: 2022-09-16T16:40:22.402963+00:00, utc_offset: +01:00, week_number: 37}
I/flutter ( 4957): 2022-09-16T17:40:22.402963+01:00
I/flutter ( 4957): +01:00
I/flutter ( 4957): 2022-09-16 16:40:22.402963Z
I/flutter ( 4957): 01
I/flutter ( 4957): 00
I/flutter ( 4957): 2022-09-16 17:40:22.402963Z
```



dart:convert

jsonDecode

Parses the string and returns the resulting Json object.

The optional reviver function is called once for each object or list property that has been parsed during decoding. The key argument is either the integer list index for a list property, the string map key for object properties, or null for the final result.

The default reviver (when not provided) is the identity function.

Shorthand for json.decode. Useful if a local variable shadows the global json constant.

Example:

```
const jsonString =
    '{"text": "foo", "value": 1, "status": false, "extra": null}';
```

Final Code:

Main.dart

```
import 'package:flutter/material.dart';
import 'package:lab10_t2/pages/choose_location.dart';
import 'package:lab10_t2/pages/home.dart';
import 'package:lab10_t2/pages/loading.dart';
// void main() => runApp(MaterialApp(
//   // home: Home(),
//   home: ChooseLocation(),
//   // home: Loading(),
// ));

void main() => runApp(MaterialApp(
    initialRoute: '/',
    routes: {
      '/': (context) => Loading(),
      '/home': (context) => Home(),
      '/location': (context) => ChooseLocation(),
    }
));
```

```
/*
void main() => runApp(MaterialApp(
   initialRoute: '/home',
   routes: {
     '/': (context) => Loading(),
     '/home': (context) => Home(),
     '/location': (context) => ChooseLocation(),
   }
));
 */
```

Loading.dart

```
import 'package:flutter/material.dart';
import 'package:lab10_t2/services/word_time.dart';

class Loading extends StatefulWidget {
  @override
  State<Loading> createState() => _LoadingState();
}
class _LoadingState extends State<Loading> {
  String? time = 'LOADING.....';
  void setWorldTime() async {
    WordTime timeinstance =
    WordTime(location: 'kolkata',flag: 'india.png',url: 'Asia/Kolkata');
    await timeinstance.getTime();
// print(timeinstance.time);
    setState(() {
      time = timeinstance.time;
    });
```

```
  }
  @override
  void initState() {
    super.initState();
    setWorldTime();
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      backgroundColor: Colors.greenAccent,
      appBar: AppBar(
        title: Text("LOADING SCREEN"),
      ),
        body: Padding(
          padding: EdgeInsets.all(60.0),
          child: Text(time.toString()),
        )
    );
  }
}
/*
import 'package:flutter/material.dart';
import 'package:http/http.dart';
import 'dart:convert';
class Loading extends StatefulWidget {
  @override
  State<Loading> createState() => _LoadingState();
}
class _LoadingState extends State<Loading> {
  void getTime() async {
```

```
// Make Request for time and receive response
   Response response = await
   //
get(Uri.parse('http://worldtimeapi.org/api/timezone/Asia/London'));

get(Uri.parse('https://www.worldtimeapi.org/api/timezone/Europe/Lo
ndon'));
   Map timeData = jsonDecode(response.body);
   print(timeData);
// Get particular property form timeData...
   String dateTime = timeData['datetime'];
   String offset = timeData['utc_offset']; //not dst_offset
   print(dateTime);
   print(offset);
   DateTime currentTime = DateTime.parse(dateTime);
   print(currentTime);
/*
DateTime currentOffset = DateTime.parse(offset);
print(currentOffset);
*/
   String offsetHours = offset.substring(1,3);
   print(offsetHours);
   String offsetMinutes = offset.substring(4,6);
   print(offsetMinutes);
   currentTime = currentTime.add(Duration(minutes:

   int.parse(offsetMinutes),hours:int.parse(offsetHours)));
   print(currentTime);
  }
  @override
  void initState() {
```

```
    super.initState();
    getTime();
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      backgroundColor: Colors.greenAccent,
      // body: Text('LOADING SCREEN'),
      appBar: AppBar(
        title: Text("LOADING SCREEN"),
      ),
    );
  }
}
 */
```

Home.dart

```
import 'package:flutter/material.dart';
class Home extends StatefulWidget {
  @override
  State<Home> createState() => _HomeState();
}
class _HomeState extends State<Home> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: SafeArea(
        child: Column(
```

```
        children: [
          TextButton.icon(onPressed: (){
            Navigator.pushNamed(context, '/location');
          },
              icon: Icon(Icons.edit_location),
              label: Text('EDIT LOCATION'),
          )
        ],
      ),
    ),
    // appBar: AppBar(
    //   title: 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> {
  int counter = 0;

  @override
  Widget build(BuildContext context) {
```

```
// print('BUILD FUNCTION RUN IN CHOOSE LOCATION...');
    return Scaffold(
      backgroundColor: Colors.blueGrey[200],
      appBar: AppBar(
        backgroundColor: Colors.deepPurpleAccent,
        title: Text('CHOOSE LOCATION'),
        centerTitle: true,
        elevation: 0,
      ),
    );
  }
}
/*
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> {
  int counter = 0;
  void getData() async {
    String username = await Future.delayed(Duration(seconds: 4), () {
      return 'UNIVERSITY NAME : DDU';
    });

    String bio = await Future.delayed(Duration(seconds: 2), () {
      return 'DDU IS ONE OF THE BEST UNIVERSITY OF GUJARAT FOR
COMPUTER ENGINEERING STUDY';
    });
```

```
    print('$username -> $bio');
  }
  @override
  void initState() {
// TODO: implement initState
    super.initState();
    print('INIT STATE FUNCTION RUN IN CHOOSE LOCATION...');
    print('before getData call');
    getData();
    print('after getData call');
  }
  @override
  Widget build(BuildContext context) {
// print('BUILD FUNCTION RUN IN CHOOSE LOCATION...');
    return Scaffold(
      backgroundColor: Colors.blueGrey[200],
      appBar: AppBar(
        backgroundColor: Colors.deepPurpleAccent,
        title: Text('CHOOSE LOCATION'),
        centerTitle: true,
        elevation: 0,
      ),
    );
  }
}

 */

/*
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> {

  int counter=0;

  void getData()
  {
    Future.delayed(Duration(seconds: 4), ()
    {
      print("University Name: DDU");
    });

    Future.delayed(Duration(seconds: 2), (){
      print("Hello Everyone.");
    });
    print("In getData() after future call.");
  }

  @override
  void initState()
  {
    super.initState();
    // print("Init state function run in choose location.");
    // print("Before getData call.");
    getData();
    // print("After getData call");
  }
```

```
/*
int counter=0;

void getData()
{
  Future.delayed(Duration(seconds: 4), ()
  {
    print("Hello Everyone.");
  });
  print("In getData() after future call.");
}

@override
void initState()
{
  super.initState();
  // print("Init state function run in choose location.");
  print("Before getData call.");
  getData();
  print("After getData call");
}
 */

@override
Widget build(BuildContext context) {
  print("BUILD FUNCTION RUN IN CHOOSE LOCATION.");
  return Scaffold(
    backgroundColor: Colors.lightBlueAccent,
    appBar: AppBar(
      backgroundColor: Colors.deepOrangeAccent,
      title: Text("CHOOSE LOCATION SCREEN"),
```

```
      centerTitle: true,
      elevation: 0,
    ),

    // body: ElevatedButton(
    //   onPressed: (){
    //     setState((){
    //       counter+=1;
    //     });
    //   },
    //   child: Text('Counter is: $counter'),
    // )


   );
  }
}
 */
```

World_time.dart

```
import 'package:http/http.dart';
import 'dart:convert';
class WordTime {
  String? location;
  String? time;
  String? flag;
  String? url;
  WordTime({ this.location,this.flag,this.url });
  Future<void> getTime() async {
    Response response = await
```

```
    get(Uri.parse('http://worldtimeapi.org/api/timezone/$url')); //
Asia/Kolkata
    Map timeData = jsonDecode(response.body);

    String dateTime = timeData['datetime'];
    String offset = timeData['utc_offset']; //not dst_offset
    String offsetHours = offset.substring(1,3);
    String offsetMinutes = offset.substring(4,6);
    DateTime currenttime = DateTime.parse(dateTime);
    currenttime = currenttime.add(
        Duration(minutes:
        int.parse(offsetMinutes),hours:int.parse(offsetHours)));
    time = currenttime.toString();
  }

}
```

Github Link:

https://github.com/GauravKaklotar/SDP/tree/master/Lab10