ADVANCE PYTHON PROGRAMMING (ETH)

WEBSITE- FLUTTER
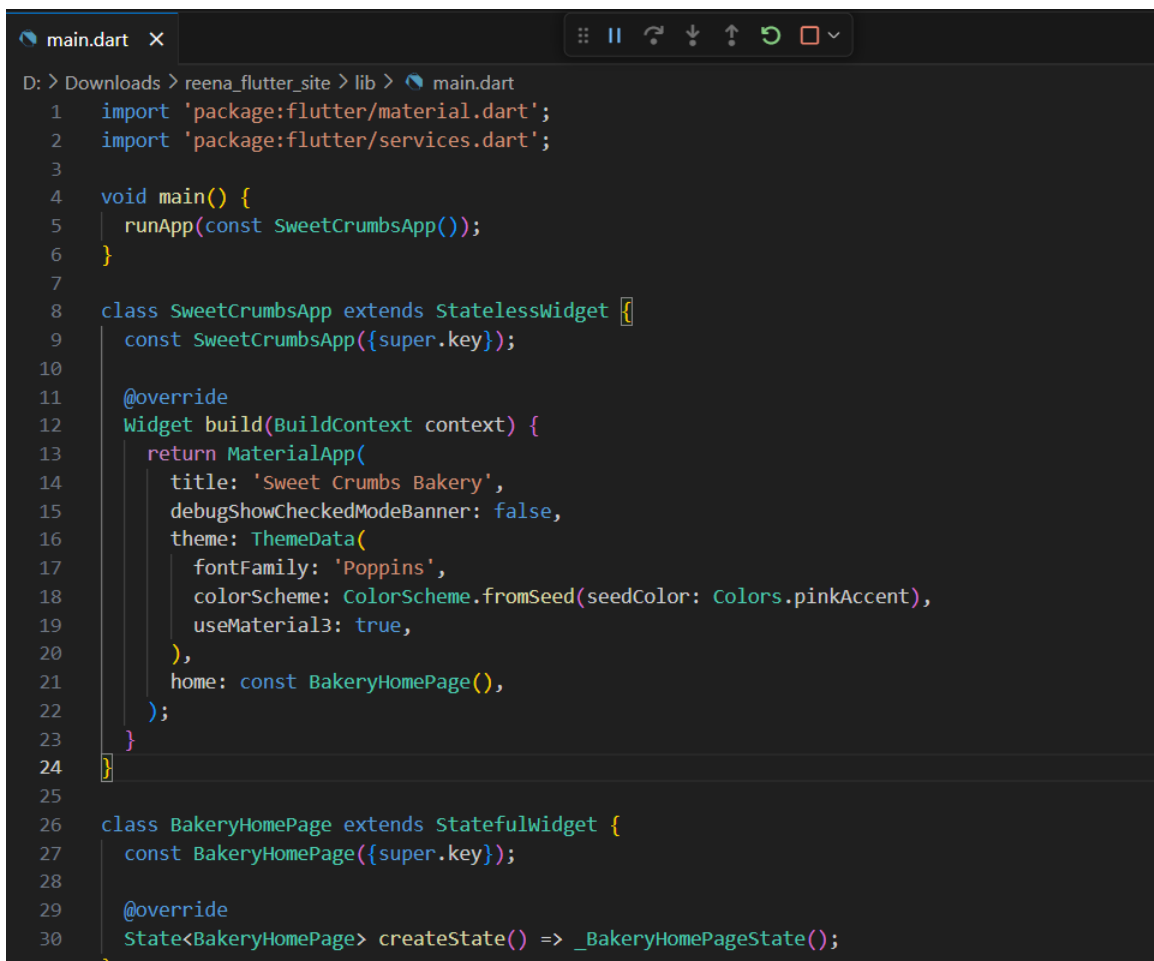
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22MID0009

STEPS:

- Install flutter
- Open the folder in terminal
- Flutter devices
- Flutter run -d chrome

SCREENSHOTS:

```dart
main.dart  X

D: > Downloads > reena_flutter_site > lib > main.dart
 1    import 'package:flutter/material.dart';
 2    import 'package:flutter/services.dart';
 3
 4    void main() {
 5      runApp(const SweetCrumbsApp());
 6    }
 7
 8    class SweetCrumbsApp extends StatelessWidget {
 9      const SweetCrumbsApp({super.key});
10
11      @override
12      Widget build(BuildContext context) {
13        return MaterialApp(
14          title: 'Sweet Crumbs Bakery',
15          debugShowCheckedModeBanner: false,
16          theme: ThemeData(
17            fontFamily: 'Poppins',
18            colorScheme: ColorScheme.fromSeed(seedColor: Colors.pinkAccent),
19            useMaterial3: true,
20          ),
21          home: const BakeryHomePage(),
22        );
23      }
24    }
25
26    class BakeryHomePage extends StatefulWidget {
27      const BakeryHomePage({super.key});
28
29      @override
30      State<BakeryHomePage> createState() => _BakeryHomePageState();
```

```dart
31    }
32
33    class _BakeryHomePageState extends State<BakeryHomePage> {
34      final ScrollController _scrollController = ScrollController();
35
36      void _scrollToProducts() {
37        _scrollController.animateTo(
38          600, // scroll distance to products
39          duration: const Duration(milliseconds: 700),
40          curve: Curves.easeInOut,
41        );
42      }
43
44      @override
45      Widget build(BuildContext context) {
46        return Scaffold(
47          body: Container(
48            decoration: const BoxDecoration(
49              gradient: LinearGradient(
50                colors: [Color(0xFFFFFF3E6), Color(0xFFFFFE6F2)],
51                begin: Alignment.topLeft,
52                end: Alignment.bottomRight,
53              ),
54            ),
55            child: SingleChildScrollView(
56              controller: _scrollController,
57              child: Column(
58                children: [
59                  const BakeryNavbar(),
60                  HeroSection(onExplore: _scrollToProducts),
61                  const ProductGrid(),
62                  const BakeryFooter(),
63                ],
64              ),
65            ),
66          ),
67        );
68      }
69    }
70
71    /* 🌸 Navbar */
72    class BakeryNavbar extends StatelessWidget {
73      const BakeryNavbar({super.key});
74
75      @override
76      Widget build(BuildContext context) {
77        return Container(
78          padding: const EdgeInsets.symmetric(horizontal: 60, vertical: 14),
79          decoration: BoxDecoration(
80            color: Colors.white.withOpacity(0.95),
81            boxShadow: [
82              BoxShadow(
83                color: Colors.black.withOpacity(0.05),
84                blurRadius: 8,
85                offset: const Offset(0, 4),
86              ),
87            ],
88          ),
89          child: Row(
90            mainAxisAlignment: MainAxisAlignment.spaceBetween,
91            children: [
92              const Text(
93                'Sweet Crumbs 🍪',
94                style: TextStyle(
95                  fontSize: 24,
96                  fontWeight: FontWeight.bold,
97                  color: Color(0xFFFF7B9C),
98                  shadows: [
99                    Shadow(color: Color(0xFFFFE3E3), offset: Offset(1, 1)),
100                   ],
101                 ),
102               ),
103               Row(
104                 children: [
105                   _navItem('Home'),
106                   _navItem('Menu'),
107                   _navItem('About'),
108                   _navItem('Cart 🛒'),
109                 ],
```

```
110                ),
111              ],
112            ),
113          );
114        }
115
116        Widget _navItem(String label) {
117          return Padding(
118            padding: const EdgeInsets.symmetric(horizontal: 14),
119            child: MouseRegion(
120              cursor: SystemMouseCursors.click,
121              child: Text(
122                label,
123                style: const TextStyle(
124                  color: Colors.black87,
125                  fontWeight: FontWeight.w500,
126                  fontSize: 16,
127                ),
128              ),
129            ),
130          );
131        }
132      }
133
134      /* 🏠 Hero Section */
```

```
133
134    /* 🏠 Hero Section */
135    class HeroSection extends StatelessWidget {
136      final VoidCallback onExplore;
137      const HeroSection({super.key, required this.onExplore});
138
139      @override
140      Widget build(BuildContext context) {
141        return Container(
142          color: Colors.white.withOpacity(0.7),
143          padding: const EdgeInsets.symmetric(vertical: 100, horizontal: 20),
144          child: Column(
145            children: [
146              const Text(
147                'Freshly Baked Happiness!',
148                textAlign: TextAlign.center,
149                style: TextStyle(
150                  fontSize: 48,
151                  fontWeight: FontWeight.bold,
152                  color: Color(0xFFFF4F70),
153                ),
154              ),
155              const SizedBox(height: 16),
156              const Text(
157                'Discover our delicious handmade treats — cupcakes, cookies, and more — baked daily with love and fresh ingredients.',
158                textAlign: TextAlign.center,
159                style: TextStyle(
160                  fontSize: 18,
161                  color: Colors.black54,
162                ),
```

```
164              const SizedBox(height: 30),
165              ElevatedButton(
166                onPressed: onExplore,
167                style: ElevatedButton.styleFrom(
168                  backgroundColor: const Color(0xFFFF7B9C),
169                  foregroundColor: Colors.white,
170                  padding:
171                      const EdgeInsets.symmetric(horizontal: 30, vertical: 14),
172                  shape: RoundedRectangleBorder(
173                    borderRadius: BorderRadius.circular(30),
174                  ),
175                  shadowColor: Colors.pinkAccent,
176                  elevation: 10,
177                ),
178                child: const Text(
179                  'Explore Menu',
180                  style: TextStyle(fontSize: 16, fontWeight: FontWeight.w600),
181                ),
182              ),
183            ],
184          ),
185        );
186      }
187    }
188
```

```dart
/* 🧁 Product Grid */
class ProductGrid extends StatelessWidget {
  const ProductGrid({super.key});

  final List<Map<String, String>> products = const [
    {
      'name': 'Chocolate Cupcake',
      'price': '₹120',
      'image': 'assets/cupcakes.jpg',
    },
    {
      'name': 'Cake',
      'price': '₹499',
      'image': 'assets/cakes.jpeg',
    },
    {
      'name': 'Butter Cookies',
      'price': '₹250',
      'image': 'assets/butter_cookies.jpg',
    },
    {
      'name': 'French Macarons',
      'price': '₹299',
      'image': 'assets/macarons.jpg',
    },
  ];

  @override
  Widget build(BuildContext context) {
    return LayoutBuilder(
      builder: (context, constraints) {
        int crossAxisCount = constraints.maxWidth < 600
            ? 1
            : constraints.maxWidth < 900
                ? 2
                : 4;
        return Padding(
          padding: const EdgeInsets.symmetric(horizontal: 60, vertical: 40),
          child: GridView.builder(
            itemCount: products.length,
            shrinkWrap: true,
            physics: const NeverScrollableScrollPhysics(),
            gridDelegate: SliverGridDelegateWithFixedCrossAxisCount(
              crossAxisCount: crossAxisCount,
              crossAxisSpacing: 30,
              mainAxisSpacing: 30,
              childAspectRatio: 0.75,
            ),
            itemBuilder: (context, index) {
              final product = products[index];
              return ProductCard(
                name: product['name']!,
                price: product['price']!,
                imagePath: product['image']!,
              );
            },
          ),
        );
      },
    );
  }
}

/* 🍰 Product Card Widget */
class ProductCard extends StatefulWidget {
  final String name;
  final String price;
  final String imagePath;

  const ProductCard({
    super.key,
    required this.name,
    required this.price,
    required this.imagePath,
  });

  @override
  State<ProductCard> createState() => _ProductCardState();
}
```

```dart
267    }
268
269    class _ProductCardState extends State<ProductCard> {
270      bool _isHovered = false;
271
272      @override
273      Widget build(BuildContext context) {
274        return MouseRegion(
275          onEnter: (_) => setState(() => _isHovered = true),
276          onExit: (_) => setState(() => _isHovered = false),
277          child: AnimatedContainer(
278            duration: const Duration(milliseconds: 250),
279            transform: Matrix4.identity()
280              ..scale(_isHovered ? 1.04 : 1.0),
281            decoration: BoxDecoration(
282              color: Colors.white,
283              borderRadius: BorderRadius.circular(20),
284              boxShadow: [
285                BoxShadow(
286                  color: _isHovered
287                      ? Colors.pinkAccent.withOpacity(0.3)
288                      : Colors.black12,
289                  blurRadius: _isHovered ? 20 : 10,
290                  offset: const Offset(0, 6),
291                ),
292              ],
293            ),
294            child: Column(
295              crossAxisAlignment: CrossAxisAlignment.center,
296              children: [
297                ClipRRect(
298                  borderRadius:
299                      const BorderRadius.vertical(top: Radius.circular(20)),
300                  child: Image.asset(
301                    widget.imagePath,
302                    height: 180,
303                    width: double.infinity,
304                    fit: BoxFit.cover,
305                  ),
306                ),
307                const SizedBox(height: 12),
308                Text(
309                  widget.name,
310                  style: const TextStyle(
311                      fontSize: 18,
312                      fontWeight: FontWeight.w600,
313                      color: Colors.black87),
314                ),
315                const SizedBox(height: 6),
316                Text(
317                  widget.price,
318                  style: const TextStyle(fontSize: 15, color: Colors.grey),
319                ),
320                const SizedBox(height: 12),
321                ElevatedButton(
322                  onPressed: () {},
323                  style: ElevatedButton.styleFrom(
324                    backgroundColor: const Color(0xFFFF7B9C),
325                    foregroundColor: Colors.white,
326                    shape: RoundedRectangleBorder(
327                      borderRadius: BorderRadius.circular(20),
328                    ),
329                    padding:
330                        const EdgeInsets.symmetric(horizontal: 24, vertical: 10),
331                  ),
332                  child: const Text('Add to Cart'),
333                ),
334              ],
335            ),
336          ),
337        );
338      }
339    }
340
341    /* ♥ Footer */
342    class BakeryFooter extends StatelessWidget {
343      const BakeryFooter({super.key});
344
```
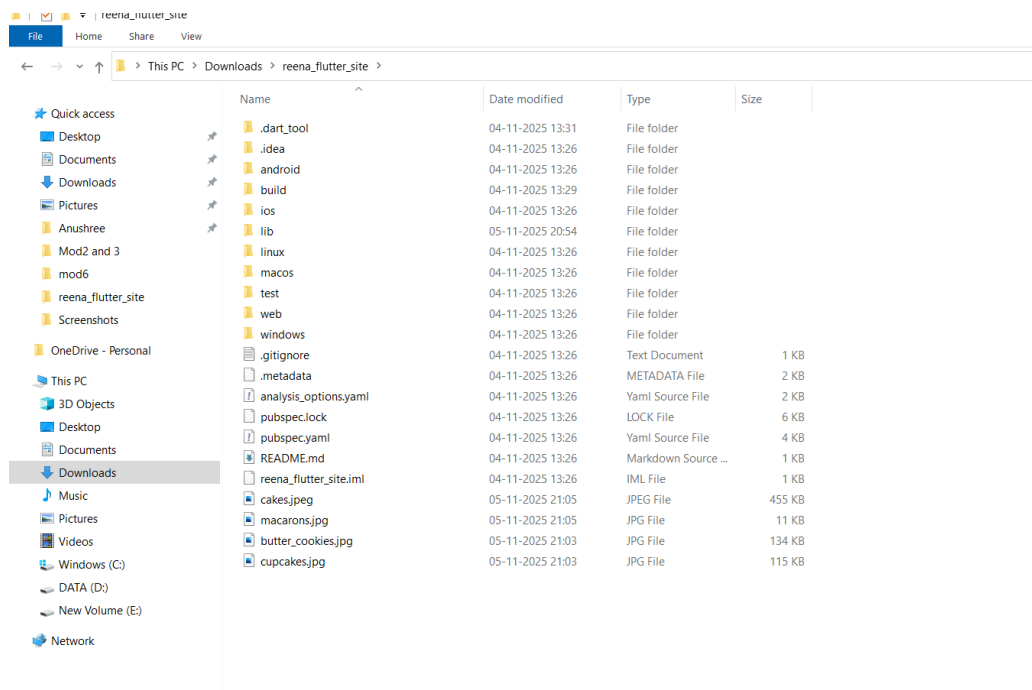
```
340
341   /* 💗 Footer */
342   class BakeryFooter extends StatelessWidget {
343     const BakeryFooter({super.key});
344
345     @override
346     Widget build(BuildContext context) {
347       return Container(
348         color: const Color(0xFFFFFF3F8),
349         padding: const EdgeInsets.all(40),
350         child: const Text(
351           '© 2025 Sweet Crumbs Bakery. Crafted with 💗 by Reena Sri G',
352           style: TextStyle(color: Colors.black54, fontSize: 15),
353           textAlign: TextAlign.center,
354         ),
355       );
356     }
357   }
358
359
```

FOLDER:

TERMINAL EXECUTION:

```
parthi@Panda 05:38 ~
flutter create reena_flutter_site
Creating project reena_flutter_site...
Resolving dependencies in `reena_flutter_site`...
Downloading packages...
Got dependencies in `reena_flutter_site`.
Wrote 130 files.

All done!
You can find general documentation for Flutter at: https://docs.flutter.dev/
Detailed API documentation is available at: https://api.flutter.dev/
If you prefer video documentation, consider: https://www.youtube.com/c/flutterdev

In order to run your application, type:

  $ cd reena_flutter_site
  $ flutter run

Your application code is in reena_flutter_site/lib/main.dart.
```

```
Your application code is in reena_flutter_site/lib/main.dart.

parthi@Panda 05:38 ~
cd reena_flutter_site/
parthi@Panda 05:39 ~/reena_flutter_site
flutter devices
Found 2 connected devices:
  Linux (desktop) • linux  • linux-x64      • Debian GNU/Linux 13 (trixie)
  6.12.48+deb13-amd64
  Chrome (web)     • chrome • web-javascript • Chromium 141.0.7390.122 built on Debian
  GNU/Linux 13 (trixie)

Run "flutter emulators" to list and start any available device emulators.

If you expected another device to be detected, please run "flutter doctor" to diagnose
potential issues. You may also try increasing the time to wait for connected devices
with the "--device-timeout" flag. Visit https://flutter.dev/setup/ for troubleshooting
tips.
```
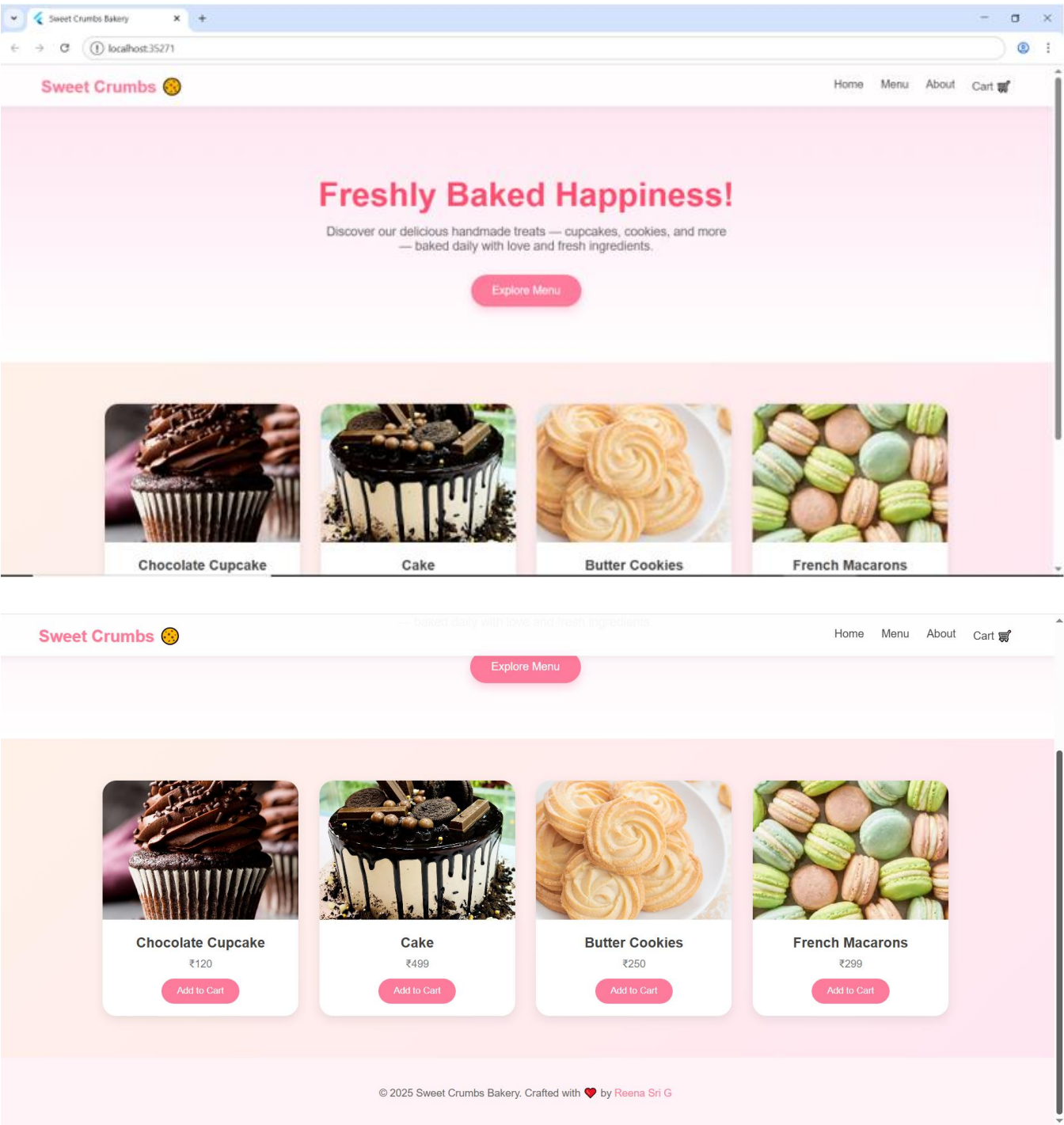
```
parthi@Panda 05:39 ~/reena_flutter_site
flutter run -d chrome
Launching lib/main.dart on Chrome in debug mode...
Waiting for connection from debug service on Chrome...          16.6s
This app is linked to the debug service: ws://127.0.0.1:40351/L2SI4rG2G0A=/ws
Debug service listening on ws://127.0.0.1:40351/L2SI4rG2G0A=/ws

Flutter run key commands.
r Hot reload. 🔥🔥🔥
R Hot restart.
h List all available interactive commands.
d Detach (terminate "flutter run" but leave application running).
c Clear the screen
q Quit (terminate the application on the device).

A Dart VM Service on Chrome is available at: http://127.0.0.1:40351/L2SI4rG2G0A=
Starting application from main method in: org-dartlang-app:/web_entrypoint.dart.
The Flutter DevTools debugger and profiler on Chrome is available at:
http://127.0.0.1:9100?uri=http://127.0.0.1:40351/L2SI4rG2G0A=
```

OUTPUT;

GITHUB LINK: https://github.com/Reenasri-17/Advance-python-programming-LAB-.git