MPL Experiment 2

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Aim: To design Flutter UI by including common widgets.

Code:

```dart
//Home screen.dart
import 'dart:convert';
import 'package:flutter/material.dart';
import 'package:firebase_auth/firebase_auth.dart';
import 'package:http/http.dart' as http;
import 'package:url_launcher/url_launcher.dart';
import 'login.dart';
import 'UsedCarScreen.dart';
import 'package:carousel_slider/carousel_slider.dart';
import 'carcompare.dart'; // Import CarCompare Page
import 'BudgetPage.dart';

class HomePage extends StatefulWidget {
  const HomePage({super.key});

  @override
  _HomePageState createState() => _HomePageState();
}

class _HomePageState extends State<HomePage> {
  Future<List<Map<String, String>>> fetchCarNews() async {
    final url =
        'https://newsapi.org/v2/everything?q="car industry" OR
"automobile" OR "new car
launch"&language=en&sortBy=publishedAt&apiKey=4c05b7fc955e4736bd656882
83299b74';

    final response = await http.get(Uri.parse(url));

    if (response.statusCode == 200) {
      final data = jsonDecode(response.body);
      List articles = data['articles'];

      return articles.map((article) {
        return {
          'title': (article['title'] ?? '').toString(),
          'image': (article['urlToImage'] ?? '').toString(),
          'url': (article['url'] ?? '').toString(),
        };
      }).toList();
    } else {
      throw Exception('Failed to load news');
    }
  }

  @override
```

```dart
  Widget build(BuildContext context) {
    final User? user = FirebaseAuth.instance.currentUser;

    if (user == null) {
      Future.delayed(Duration.zero, () {
        Navigator.pushReplacement(
          context,
          MaterialPageRoute(builder: (context) => const LoginPage()),
        );
      });
      return const Scaffold(
        backgroundColor: Colors.black,
        body: Center(child: CircularProgressIndicator(color:
Colors.white)),
      );
    }

    final List<String> featuredCarImages = [
      'assets/harrier.png',
      'assets/white-offroader-jeep-parking.png',
      'assets/harrier.png',
      'assets/mercec.png',
      'assets/creata.png'
    ];

    return Scaffold(
      backgroundColor: Colors.black,
      appBar: AppBar(
        backgroundColor: Colors.black,
        elevation: 0,
        title: Row(
          children: [
            Image.asset('assets/car.png', height: 40),
            const SizedBox(width: 10),
            const Text(
              "CarConnect",
              style: TextStyle(
                color: Colors.white,
                fontSize: 22,
                fontWeight: FontWeight.bold,
                fontFamily: 'Roboto',
                letterSpacing: 1.2,
              ),
            ),
          ],
        ),
        actions: [
          IconButton(
            icon: const Icon(Icons.logout, color: Colors.white),
            onPressed: () async {
              await FirebaseAuth.instance.signOut();
              Navigator.pushReplacement(
                context,
                MaterialPageRoute(builder: (context) => const
LoginPage()),
```

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                );
              },
            ),
          ],
        ),
      body: SingleChildScrollView(
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            Padding(
              padding: const EdgeInsets.all(16.0),
              child: TextField(
                style: const TextStyle(color: Colors.white),
                decoration: InputDecoration(
                  hintText: "Search for your car e.g. Creta",
                  hintStyle: TextStyle(color: Colors.white60),
                  filled: true,
                  fillColor: Colors.grey[900],
                  border: OutlineInputBorder(
                    borderRadius: BorderRadius.circular(10),
                    borderSide: BorderSide.none,
                  ),
                  prefixIcon: Icon(Icons.search, color:
Colors.white60),
                ),
              ),
            ),
            Padding(
              padding: const EdgeInsets.symmetric(horizontal: 16.0),
              child: Row(
                mainAxisAlignment: MainAxisAlignment.spaceBetween,
                children: [
                  _filterButton("Compare", Icons.scale, onTap: () {
                    Navigator.push(
                      context,
                      MaterialPageRoute(
                          builder: (context) => CarComparisonPage()),
                    );
                  }),
                  _filterButton("Used", Icons.directions_car, onTap:
() {
                    Navigator.push(
                      context,
                      MaterialPageRoute(builder: (context) =>
UsedCarScreen()),
                    );
                  }),
                  _filterButton("Budget", Icons.attach_money, onTap:
() {
                    Navigator.push(
                      context,
                      MaterialPageRoute(
                        builder: (context) => BudgetPage(
                          carName:
                              "Your Selected Car", // Pass selected
```

```
car Name
                        exShowroomPrice:
                            1000000, // Pass selected car price
dynamically
                      ),
                    ),
                  );
                }),
                _filterButton("More", Icons.tune),
              ],
            ),
          ),
        ),
      Padding(
        padding: const EdgeInsets.all(16.0),
        child: ClipRRect(
          borderRadius: BorderRadius.circular(10),
          child: SizedBox(
            width: double.infinity,
            height: 400,
            child: Image.asset(
              'assets/pexels-samyantak-mohanty-79378681-
8706096.png',
              fit: BoxFit.cover,
            ),
          ),
        ),
      ),
      const Padding(
        padding: EdgeInsets.all(16.0),
        child: Text(
          'Featured Cars',
          style: TextStyle(
              fontSize: 20,
              fontWeight: FontWeight.bold,
              color: Colors.white),
        ),
      ),
      CarouselSlider(
        options: CarouselOptions(autoPlay: true,
enlargeCenterPage: true),
          items: featuredCarImages.map((imagePath) {
            return ClipRRect(
              borderRadius: BorderRadius.circular(10),
              child: Image.asset(imagePath, fit: BoxFit.cover),
            );
          }).toList(),
      ),
      const Padding(
        padding: EdgeInsets.all(16.0),
        child: Text(
          'Latest Car News',
          style: TextStyle(
              fontSize: 20,
              fontWeight: FontWeight.bold,
              color: Colors.white),
```

```
            ),
          ),
          FutureBuilder<List<Map<String, String>>>(
            future: fetchCarNews(),
            builder: (context, snapshot) {
              if (snapshot.connectionState ==
ConnectionState.waiting) {
                return const Center(
                    child: CircularProgressIndicator(color:
Colors.white));
              } else if (snapshot.hasError) {
                return Center(
                  child: Text(
                    "Failed to load news",
                    style: TextStyle(color: Colors.white),
                  ),
                );
              } else if (!snapshot.hasData ||
snapshot.data!.isEmpty) {
                return Center(
                  child: Text(
                    "No news available",
                    style: TextStyle(color: Colors.white),
                  ),
                );
              }

              return SizedBox(
                height: 250,
                child: ListView.builder(
                  scrollDirection: Axis.horizontal,
                  itemCount: snapshot.data!.length,
                  itemBuilder: (context, index) {
                    final news = snapshot.data![index];
                    return GestureDetector(
                      onTap: () async {
                        Uri url = Uri.parse(news['url']!);
                        if (await canLaunchUrl(url)) {
                          await launchUrl(url);
                        }
                      },
                      child: Card(
                        color: Colors.grey[900],
                        margin: const EdgeInsets.symmetric(
                            horizontal: 8, vertical: 8),
                        shape: RoundedRectangleBorder(
                          borderRadius: BorderRadius.circular(10),
                        ),
                        child: SizedBox(
                          width: 300,
                          child: Column(
                            crossAxisAlignment:
CrossAxisAlignment.start,
                            children: [
                              if (news['image']!.isNotEmpty)
```

```dart
                                        ClipRRect(
                                          borderRadius: const
BorderRadius.vertical(
                                              top: Radius.circular(10)),
                                          child:
Image.network(news['image']!,
                                              fit: BoxFit.cover,
                                              height: 150,
                                              width: double.infinity),
                                        ),
                                    Padding(
                                      padding: const EdgeInsets.all(10),
                                      child: Text(
                                        news['title']!,
                                        style: const TextStyle(
                                            color: Colors.white,
                                            fontSize: 16,
                                            fontWeight: FontWeight.bold),
                                        maxLines: 2,
                                        overflow: TextOverflow.ellipsis,
                                      ),
                                    ),
                                  ],
                                ),
                              ),
                            ),
                          );
                        },
                      ),
                    );
                  },
                ),
              ],
            ),
          ),
        ),
      );
    }

  Widget _filterButton(String title, IconData icon, {VoidCallback?
onTap}) {
      return ElevatedButton.icon(
        style: ElevatedButton.styleFrom(
          backgroundColor: Colors.grey[900],
          shape: RoundedRectangleBorder(borderRadius:
BorderRadius.circular(10)),
        ),
        onPressed: onTap,
        icon: Icon(icon, color: Colors.white60),
        label: Text(title, style: const TextStyle(color: Colors.white)),
      );
```
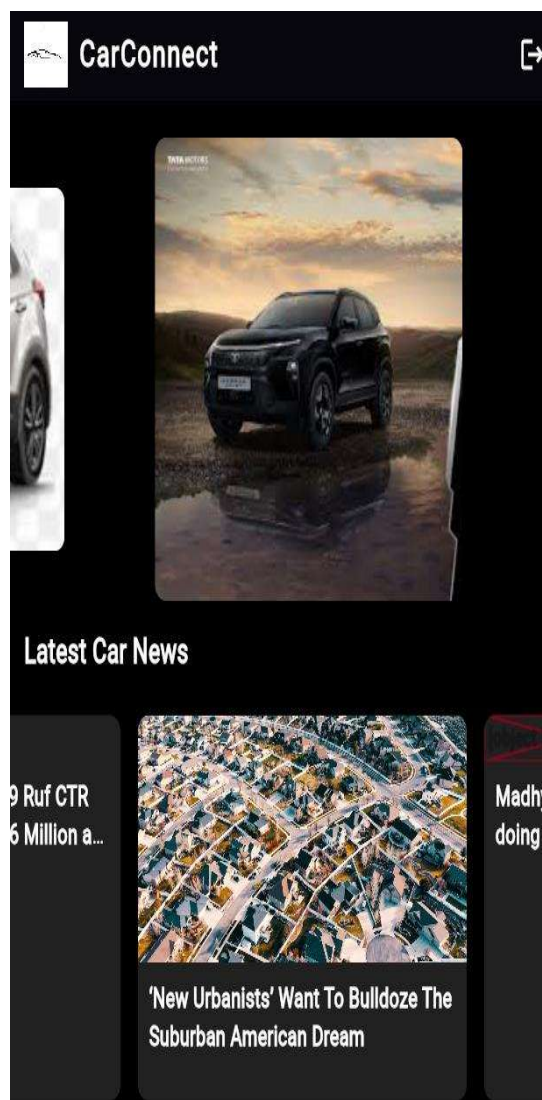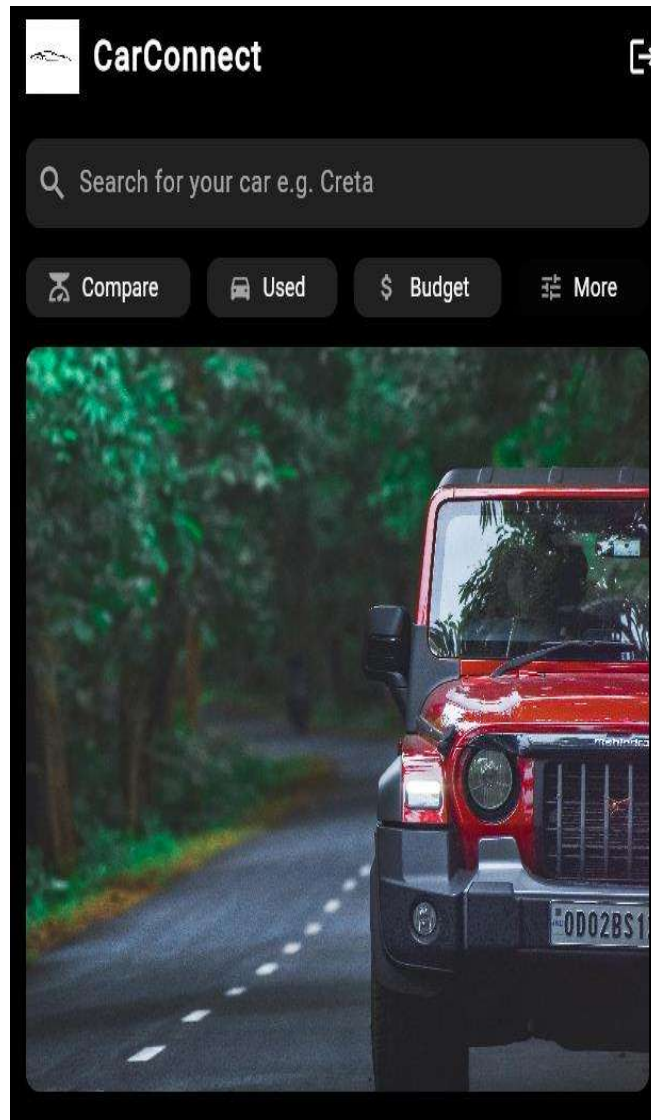
Output:

HomePage:

Widget :

Widget are crated above home screen in the from of buttons that is used to direct to another pages i.e .Compare ,Used ,Budget