

Experiment	7
Aim	Create an app for a restaurant to deliver food at doorstep.
Objective	To create app for restaurant food delivery app.
	To use either side or tabs menu
	• To create your own theme for the app.
	• To create Splash screen for the app.
Name	Abhijit Khambekar
UCID	2024510027
Class	FYMCA
Batch	D
Date of	
Submission	

Taskaslasas	Vigual Chadia Coda	
Technology	Visual Studio Code	
used		
Task	Create Restaurant App for food delivery at your doorstep. Consider your	
	own creativity and theme. Make use of multiple widgets and themes for	
	make it look the best.	
Code with	Main.dart:	
proper label	import 'package:flutter/material.dart';	
- -	import 'package:shared_preferences/shared_preferences.dart';	
	import 'dart:convert';	
	import 'dart:async';	
	11 106	
	void main() {	
	runApp(MyApp());	
	}	
	class MyApp extends StatelessWidget {	
	@override	
	Widget build(BuildContext context) {	
	return MaterialApp(
	title: 'Tomato',	
	theme: ThemeData(
	primaryColor: Colors.red[200], // 60% primary color	
	scaffoldBackgroundColor: Colors.red[50], // Lighter shade for background	
	colorScheme: ColorScheme.light(
	primary: Colors.red[200]!, // 60% primary	
	secondary: Colors.red[900]!, // 10% accent	
	surface: Colors.white, // 30% secondary	
),	
	elevatedButtonTheme: ElevatedButtonThemeData(
	style: ElevatedButton.styleFrom(
	backgroundColor: Colors.red[900], // Accent for buttons	
	foregroundColor: Colors.white,	
),	
), textTheme: TextTheme(
	bodyMedium: Text1neme(bodyMedium: TextStyle(color: Colors.black87),	
	titleLarge: TextStyle(color: Colors.red[900]), // Accent for titles	
)	
	1, /,	



(Autonomous Institute Affiliated to University of Mumbai) Munshi Nagar, Andheri (W), Mumbai – 400 058.

```
Department of Computer Science and Engineering
   home: SplashScreen(),
  );
}
class SplashScreen extends StatefulWidget {
 @override
 _SplashScreenState createState() => _SplashScreenState();
class SplashScreenState extends State<SplashScreen> with
SingleTickerProviderStateMixin {
 late AnimationController _controller;
 late Animation<double>_fadeAnimation;
 late Animation<double>_scaleAnimation;
 @override
 void initState() {
  super.initState();
  _controller = AnimationController(
   duration: Duration(seconds: 2),
   vsync: this,
  _fadeAnimation = Tween<double>(begin: 0.0, end: 1.0).animate(
   CurvedAnimation(parent: controller, curve: Curves.easeIn),
  _scaleAnimation = Tween<double>(begin: 0.5, end: 1.0).animate(
   CurvedAnimation(parent: _controller, curve: Curves.elasticOut),
  _controller.forward();
  Timer(Duration(seconds: 3), () {
   Navigator.pushReplacement(
    context,
    MaterialPageRoute(builder: (context) => HomeScreen()),
   );
  });
 @override
 void dispose() {
  _controller.dispose();
  super.dispose();
 @override
 Widget build(BuildContext context) {
  return Scaffold(
   backgroundColor: Colors.red[200], // 60% primary
   body: Stack(
    children: [
      // Background gradient
      Container(
       decoration: BoxDecoration(
        gradient: RadialGradient(
```



(Autonomous Institute Affiliated to University of Mumbai)

Munshi Nagar, Andheri (W), Mumbai – 400 058.

Department of Computer Science and Engineering

```
center: Alignment.center,
         radius: 1.5,
         colors: [Colors.red[200]!, Colors.red[400]!],
        ),
       ),
      Center(
       child: Column(
        mainAxisAlignment: MainAxisAlignment.center,
        children: [
          ScaleTransition(
           scale: _scaleAnimation,
           child: Icon(
            Icons.local_dining,
            size: 100,
            color: Colors.red[900], // 10% accent
          SizedBox(height: 20),
          FadeTransition(
           opacity: _fadeAnimation,
           child: Text(
            'Tomato',
            style: TextStyle(
             fontSize: 60,
             fontWeight: FontWeight.bold,
             color: Colors.white, // 30% secondary
             shadows: [
               Shadow(
                blurRadius: 10.0,
                color: Colors.red[900]!.withOpacity(0.5),
                offset: Offset(2, 2),
          SizedBox(height: 10),
          FadeTransition(
           opacity: _fadeAnimation,
           child: Text(
            'Freshness on silver platter',
            style: TextStyle(
             fontSize: 24,
             fontStyle: FontStyle.italic,
             color: Colors.red[900], // 10% accent
class HomeScreen extends StatefulWidget {
```



(Autonomous Institute Affiliated to University of Mumbai) Munshi Nagar, Andheri (W), Mumbai – 400 058.

Department of Computer Science and Engineering @override _HomeScreenState createState() => _HomeScreenState(); class _HomeScreenState extends State<HomeScreen> { int selectedIndex = 0; static List<Widget> widgetOptions = <Widget>[CuisinesTab(), CartTab(), ProfileTab(), void _onItemTapped(int index) { setState(() { _selectedIndex = index; Navigator.pop(context); // Close drawer after selection @override Widget build(BuildContext context) { return Scaffold(appBar: AppBar(title: Text('Tomato'), backgroundColor: Colors.red[200], // 60% primary body: _widgetOptions.elementAt(_selectedIndex), drawer: Drawer(child: Container(color: Colors.white, // 30% secondary child: ListView(padding: EdgeInsets.zero, children: [DrawerHeader(decoration: BoxDecoration(gradient: LinearGradient(colors: [Colors.red[200]!, Colors.red[900]!], // Primary to accent begin: Alignment.topLeft, end: Alignment.bottomRight, child: Column(crossAxisAlignment: CrossAxisAlignment.start, mainAxisAlignment: MainAxisAlignment.end, children: [Text('Tomato', style: TextStyle(color: Colors.white, // Secondary fontSize: 24, fontWeight: FontWeight.bold,), Text('Your Food Haven', style: TextStyle(color: Colors.white70,

fontSize: 16,



(Autonomous Institute Affiliated to University of Mumbai) Munshi Nagar, Andheri (W), Mumbai – 400 058.

Department of Computer Science and Engineering], ListTile(leading: Icon(Icons.restaurant menu, color: Colors.red[900]), // Accent title: Text('Cuisines', style: TextStyle(color: Colors.black87)), selected: $_$ selectedIndex == 0, selectedTileColor: Colors.red[100], // Light primary onTap: () => _onItemTapped(0), ListTile(leading: Icon(Icons.shopping_cart, color: Colors.red[900]), title: Text('Cart', style: TextStyle(color: Colors.black87)), selected: _selectedIndex == 1, selectedTileColor: Colors.red[100], onTap: () \Rightarrow _onItemTapped(1), ListTile(leading: Icon(Icons.person, color: Colors.red[900]), title: Text('Profile', style: TextStyle(color: Colors.black87)), selected: _selectedIndex == 2, selectedTileColor: Colors.red[100], onTap: () \Rightarrow _onItemTapped(2), class Cuisine { final String name; final String description; final double price; final String imageUrl; Cuisine({required this.name, required this.description, required this.price, required this.imageUrl}); class CuisinesTab extends StatelessWidget { final List<Cuisine> cuisines = [Cuisine(name: 'Margherita Pizza', description: 'Classic pizza with tomato and mozzarella', price: 12.99, imageUrl: 'https://via.placeholder.com/150', Cuisine(name: 'Pasta Carbonara', description: 'Creamy pasta with bacon and parmesan', price: 14.99, imageUrl: 'https://via.placeholder.com/150', Cuisine(



(Autonomous Institute Affiliated to University of Mumbai)

Munshi Nagar, Andheri (W), Mumbai – 400 058.

```
Department of Computer Science and Engineering
   name: 'Caesar Salad',
   description: 'Fresh romaine with caesar dressing',
   price: 8.99,
   imageUrl: 'https://via.placeholder.com/150',
  Cuisine(
   name: 'Grilled Salmon'.
   description: 'Fresh salmon with lemon herb sauce',
   price: 18.99,
   imageUrl: 'https://via.placeholder.com/150',
  Cuisine(
   name: 'Tiramisu',
   description: 'Classic Italian coffee dessert',
   price: 6.99,
   imageUrl: 'https://via.placeholder.com/150',
 ];
 @override
 Widget build(BuildContext context) {
  return GridView.builder(
   padding: EdgeInsets.all(10),
   gridDelegate: SliverGridDelegateWithFixedCrossAxisCount(
     crossAxisCount: 1,
     childAspectRatio: 1.6, // Adjusted to increase card height by ~14 pixels to
fix 13-pixel overflow
     crossAxisSpacing: 10,
     mainAxisSpacing: 10,
   itemCount: cuisines.length,
   itemBuilder: (context, index) {
    final cuisine = cuisines[index];
     return Card(
      color: Colors.white, // 30% secondary
      elevation: 4,
      shape: RoundedRectangleBorder(borderRadius:
BorderRadius.circular(12)),
      child: Row(
       crossAxisAlignment: CrossAxisAlignment.start,
       children: [
        ClipRRect(
         borderRadius: BorderRadius.only(
           topLeft: Radius.circular(12),
           bottomLeft: Radius.circular(12),
         child: Image.network(
           cuisine.imageUrl,
           width: 120,
           height: 120,
           fit: BoxFit.cover,
           errorBuilder: (context, error, stackTrace) => Container(
            width: 120,
            height: 120,
            color: Colors.grey[300],
            child: Icon(Icons.image not supported),
         ),
```



(Autonomous Institute Affiliated to University of Mumbai)

Munshi Nagar, Andheri (W), Mumbai – 400 058.

Department of Computer Science and Engineering

```
Expanded(
         child: Padding(
           padding: EdgeInsets.all(12),
           child: Column(
            crossAxisAlignment: CrossAxisAlignment.start,
            mainAxisAlignment: MainAxisAlignment.start,
            children: [
             Text(
              cuisine.name,
              style: TextStyle(
               fontSize: 20,
                fontWeight: FontWeight.bold,
               color: Colors.red[900], // 10% accent
              overflow: TextOverflow.ellipsis,
              maxLines: 1,
             SizedBox(height: 8),
             Text(
              cuisine.description,
              style: TextStyle(fontSize: 16, color: Colors.black87),
              overflow: TextOverflow.ellipsis,
              maxLines: 2,
             SizedBox(height: 8),
             Text(
              "\$${cuisine.price.toStringAsFixed(2)}',
              style: TextStyle(fontSize: 16, color: Colors.black87),
             ElevatedButton(
              style: ElevatedButton.styleFrom(
               padding: EdgeInsets.symmetric(horizontal: 16, vertical: 10),
              onPressed: () async {
                await Cart.addToCart(cuisine);
                ScaffoldMessenger.of(context).showSnackBar(
                 SnackBar(content: Text('${cuisine.name} added to cart')),
              child: Text('Add to Cart', style: TextStyle(fontSize: 14)),
             SizedBox(height: 8), // Spacing below button
class CartItem {
 final Cuisine cuisine;
 int quantity;
 CartItem({required this.cuisine, this.quantity = 1});
```



(Autonomous Institute Affiliated to University of Mumbai) Munshi Nagar, Andheri (W), Mumbai – 400 058.

Department of Computer Science and Engineering

```
Map<String, dynamic> toJson() => {
     'cuisine': {
      'name': cuisine.name,
      'description': cuisine.description,
      'price': cuisine.price,
      'imageUrl': cuisine.imageUrl,
     'quantity': quantity,
 static CartItem from Json (Map < String, dynamic > json) {
  return CartItem(
   cuisine: Cuisine(
    name: json['cuisine']['name'],
     description: json['cuisine']['description'],
    price: json['cuisine']['price'],
    imageUrl: json['cuisine']['imageUrl'],
   quantity: json['quantity'],
class Cart {
 static List<CartItem> items = [];
 static Future<void> loadCart() async {
  final prefs = await SharedPreferences.getInstance();
  final cartData = prefs.getString('cart');
  if (cartData != null) {
   final List<dynamic> jsonData = jsonDecode(cartData);
   items = jsonData.map((item) => CartItem.fromJson(item)).toList();
 }
 static Future<void> saveCart() async {
  final prefs = await SharedPreferences.getInstance();
  final jsonData = items.map((item) => item.toJson()).toList();
  await prefs.setString('cart', jsonEncode(jsonData));
 static Future<void> addToCart(Cuisine cuisine) async {
  await loadCart();
  final existingItem = items.firstWhere(
   (item) => item.cuisine.name == cuisine.name,
   orElse: () => CartItem(cuisine: cuisine),
  if (!items.contains(existingItem)) {
   items.add(existingItem);
  } else {
   existingItem.quantity++;
  await saveCart();
 static Future<void> updateQuantity(CartItem item, int delta) async {
  await loadCart():
  final cartItem = items.firstWhere((i) => i.cuisine.name == item.cuisine.name);
```



(Autonomous Institute Affiliated to University of Mumbai)

Munshi Nagar, Andheri (W), Mumbai – 400 058.

Department of Computer Science and Engineering

```
cartItem.quantity += delta;
  if (cartItem.quantity \leq 0) {
   items.remove(cartItem);
  await saveCart();
 static Future<void> clearCart() async {
  items.clear();
  await saveCart();
 static double getTotalCost() {
  return items.fold(0.0, (sum, item) => sum + (item.cuisine.price *
item.quantity));
}
class CartTab extends StatefulWidget {
 @override
  _CartTabState createState() => _CartTabState();
class CartTabState extends State<CartTab> {
 @override
 void initState() {
  super.initState();
  Cart.loadCart().then((_) => setState(() { }));
 @override
 Widget build(BuildContext context) {
  return Column(
   children: [
     Expanded(
      child: Cart.items.isEmpty
        ? Center(child: Text('No cuisines added', style: TextStyle(color:
Colors.black87)))
        : GridView.builder(
           padding: EdgeInsets.all(10),
           gridDelegate: SliverGridDelegateWithFixedCrossAxisCount(
            crossAxisCount: 1,
            childAspectRatio: 1.6, // Adjusted to increase card height by ~14
pixels to fix 13-pixel overflow
            crossAxisSpacing: 10,
            mainAxisSpacing: 10,
           itemCount: Cart.items.length,
           itemBuilder: (context, index) {
            final item = Cart.items[index];
            return Card(
             color: Colors.white, // 30% secondary
             elevation: 4,
             shape: RoundedRectangleBorder(borderRadius:
BorderRadius.circular(12)),
             child: Row(
              crossAxisAlignment: CrossAxisAlignment.start,
              children: [
                ClipRRect(
```



(Autonomous Institute Affiliated to University of Mumbai)

Munshi Nagar, Andheri (W), Mumbai – 400 058.

```
Department of Computer Science and Engineering
                 borderRadius: BorderRadius.only(
                  topLeft: Radius.circular(12),
                  bottomLeft: Radius.circular(12),
                 child: Image.network(
                  item.cuisine.imageUrl,
                  width: 120.
                  height: 120,
                  fit: BoxFit.cover,
                  errorBuilder: (context, error, stackTrace) => Container(
                   width: 120,
                   height: 120,
                   color: Colors.grey[300],
                   child: Icon(Icons.image not supported),
                Expanded(
                 child: Padding(
                  padding: EdgeInsets.all(12),
                  child: Column(
                   crossAxisAlignment: CrossAxisAlignment.start,
                   mainAxisAlignment: MainAxisAlignment.start,
                   children: [
                     Text(
                      item.cuisine.name,
                      style: TextStyle(
                       fontSize: 20,
                       fontWeight: FontWeight.bold,
                       color: Colors.red[900], // 10% accent
                      overflow: TextOverflow.ellipsis,
                      maxLines: 1,
                     SizedBox(height: 8),
                      item.cuisine.description,
                      style: TextStyle(fontSize: 16, color: Colors.black87),
                      overflow: TextOverflow.ellipsis,
                      maxLines: 2,
                     SizedBox(height: 8),
                      \$\{\text{item.cuisine.price.toStringAsFixed(2)}\',
                      style: TextStyle(fontSize: 16, color: Colors.black87),
                     Row(
                      children: [
                       IconButton(
                        icon: Icon(Icons.remove, color: Colors.red[900]), //
Accent
                        onPressed: () async {
                         await Cart.updateQuantity(item, -1);
                         setState(() { });
                       Text('${item.quantity}', style: TextStyle(color:
Colors.black87, fontSize: 16)),
                       IconButton(
```



(Autonomous Institute Affiliated to University of Mumbai)

Munshi Nagar, Andheri (W), Mumbai – 400 058.

```
Department of Computer Science and Engineering
                        icon: Icon(Icons.add, color: Colors.red[900]), // Accent
                        onPressed: () async {
                          await Cart.updateQuantity(item, 1);
                          setState(() {});
                      ],
                     SizedBox(height: 8), // Spacing below buttons
     if (Cart.items.isNotEmpty)
      Padding(
       padding: EdgeInsets.all(10),
       child: Row(
        mainAxisAlignment: MainAxisAlignment.spaceBetween,
        children: [
          Text(
           'Total: \$${Cart.getTotalCost().toStringAsFixed(2)}',
           style: TextStyle(
            fontSize: 18,
            fontWeight: FontWeight.bold,
            color: Colors.red[900], // Accent
         ElevatedButton(
           onPressed: () async {
            showDialog(
             context: context,
             builder: (context) => AlertDialog(
              backgroundColor: Colors.white, // 30% secondary
              title: Text('Order Confirmed', style: TextStyle(color:
Colors.red[900])), // Accent
              content: Text('Your order will be delivered to the given address
shortly.'),
              actions: [
                TextButton(
                 onPressed: () async {
                  await Cart.clearCart();
                  Navigator.pop(context);
                  setState(() { });
                 child: Text('OK', style: TextStyle(color: Colors.red[900])), //
Accent
           child: Text('Buy Now', style: TextStyle(fontSize: 16)),
```



(Autonomous Institute Affiliated to University of Mumbai) Munshi Nagar, Andheri (W), Mumbai – 400 058.

```
Department of Computer Science and Engineering
  );
class ProfileTab extends StatefulWidget {
 @override
 _ProfileTabState createState() => _ProfileTabState();
class ProfileTabState extends State<ProfileTab> {
 final _formKey = GlobalKey<FormState>();
 final _nameController = TextEditingController();
 final _addressController = TextEditingController();
 final _contactController = TextEditingController();
 final _emailController = TextEditingController();
 @override
 void initState() {
  super.initState();
   loadProfile();
 Future<void> loadProfile() async {
  final prefs = await SharedPreferences.getInstance();
  setState(() {
   _nameController.text = prefs.getString('name') ?? ";
   _addressController.text = prefs.getString('address') ?? ";
   _contactController.text = prefs.getString('contact') ?? ";
    _emailController.text = prefs.getString('email') ?? ";
  });
 Future<void>_saveProfile() async {
  if (_formKey.currentState!.validate()) {
   final prefs = await SharedPreferences.getInstance();
   await prefs.setString('name', _nameController.text);
   await prefs.setString('address', _addressController.text); await prefs.setString('contact', _contactController.text);
   await prefs.setString('email', _emailController.text);
   ScaffoldMessenger.of(context).showSnackBar(
     SnackBar(content: Text('Profile saved')),
 @override
 Widget build(BuildContext context) {
  return Padding(
   padding: EdgeInsets.all(16.0),
   child: Card(
     color: Colors.white, // 30% secondary
     elevation: 4.
     shape: RoundedRectangleBorder(borderRadius: BorderRadius.circular(12)),
     child: Padding(
      padding: EdgeInsets.all(16.0),
```



(Autonomous Institute Affiliated to University of Mumbai) Munshi Nagar, Andheri (W), Mumbai – 400 058.

Department of Computer Science and Engineering

```
child: Form(
 key: _formKey,
 child: Column(
  children: [
   TextFormField(
    controller: nameController,
    decoration: InputDecoration(
      labelText: 'Name',
      labelStyle: TextStyle(color: Colors.red[900]), // Accent
      focusedBorder: UnderlineInputBorder(
       borderSide: BorderSide(color: Colors.red[900]!), // Accent
      ),
    validator: (value) {
      if (value == null || value.isEmpty) {
       return 'Please enter your name';
     return null;
    },
   TextFormField(
    controller: addressController,
    decoration: InputDecoration(
      labelText: 'Address',
      labelStyle: TextStyle(color: Colors.red[900]),
      focusedBorder: UnderlineInputBorder(
       borderSide: BorderSide(color: Colors.red[900]!),
      ),
    ),
    validator: (value) {
      if (value == null || value.isEmpty) {
       return 'Please enter your address';
      return null;
    },
   TextFormField(
    controller: _contactController,
    decoration: InputDecoration(
      labelText: 'Contact No',
      labelStyle: TextStyle(color: Colors.red[900]),
      focusedBorder: UnderlineInputBorder(
       borderSide: BorderSide(color: Colors.red[900]!),
    keyboardType: TextInputType.phone,
    validator: (value) {
      if (value == null || value.isEmpty) {
       return 'Please enter your contact number';
     return null;
    },
   TextFormField(
    controller: _emailController,
    decoration: InputDecoration(
      labelText: 'Email',
      labelStyle: TextStyle(color: Colors.red[900]),
      focusedBorder: UnderlineInputBorder(
```



(Autonomous Institute Affiliated to University of Mumbai) Munshi Nagar, Andheri (W), Mumbai – 400 058.

```
Department of Computer Science and Engineering
                               borderSide: BorderSide(color: Colors.red[900]!),
                            keyboardType: TextInputType.emailAddress,
                             validator: (value) {
                             if (value == null || value.isEmpty) {
                               return 'Please enter your email';
                             if (!RegExp(r'^[\w-\]+@([\w-]+\.)+[\w-]{2,4}\$').hasMatch(value)) {
                              return 'Please enter a valid email';
                             return null;
                           SizedBox(height: 20),
                           ElevatedButton(
                            onPressed: _saveProfile,
                            child: Text('Save Profile', style: TextStyle(fontSize: 16)),
                   @override
                   void dispose() {
                    _nameController.dispose();
                    _addressController.dispose();
                    _contactController.dispose();
                    _emailController.dispose();
                    super.dispose();
                  }
Screenshots
Ouestion and
                 Answer the following Questions:
                 1. How did you use 60-30-10 rule in your application?
Answers
                    Solu: The 60-30-10 color rule is applied in the "Tomato" application by
                    using a primary red shade (Colors.red[200]) for 60% of the UI, such as
                    the app bar, splash screen background, and scaffold background. A
                    secondary white color (Colors.white) covers 30% of the UI, used in
                    cards, drawer backgrounds, and profile form backgrounds. The accent
                    color (Colors.red[900]) constitutes 10%, enhancing buttons, icons, text
                    titles, and highlights for visual emphasis.
                 2. Which new elements did you use for creating UI components?
                    Solu: The application incorporates new UI elements like
                    RadialGradient for a dynamic splash screen background and
                    LinearGradient in the drawer header for visual appeal. ScaleTransition
```

and FadeTransition are used for smooth animations on the splash



(Autonomous Institute Affiliated to University of Mumbai) Munshi Nagar, Andheri (W), Mumbai – 400 058.

Department of Computer Science and Engineering screen's icon and text. Additionally, GridView.builder is utilized to create a responsive grid layout for displaying cuisines and cart items efficiently.

3. In pubspec.yaml file, what dependencies need to be there?

Solu: The pubspec.yaml file must include the flutter dependency as the core framework. The shared_preferences dependency is required for persistent storage of cart and profile data. Optionally, the http dependency may be needed for loading network images, as the app uses placeholder image URLs. These dependencies ensure the app's functionality for storage and potential network operations.

4. What is the use of Splash Screen?

Solu: The splash screen in the "Tomato" app serves as a branded introduction, displaying the app's logo and tagline with fade and scale animations. It provides a polished first impression, engaging users during the app's initialization. The screen transitions to the home screen after a 3-second delay, enhancing the user experience. It also allows time for initial data loading if needed.

Conclusion

Learned how to create a splashy splash screen – understand the logic of creating an add cart successfully.

Screenshots:

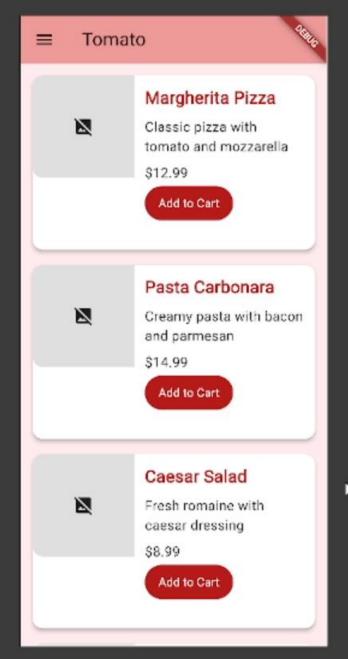




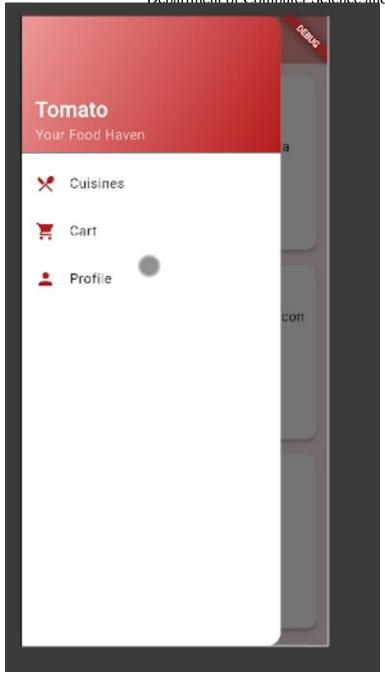


(Autonomous Institute Affiliated to University of Mumbai) Munshi Nagar, Andheri (W), Mumbai – 400 058.

Department of Computer Science and Engineering







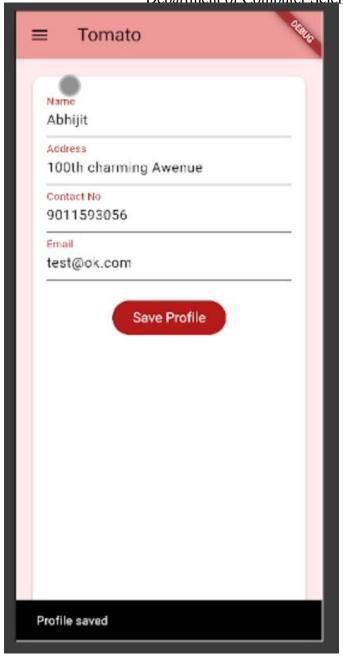




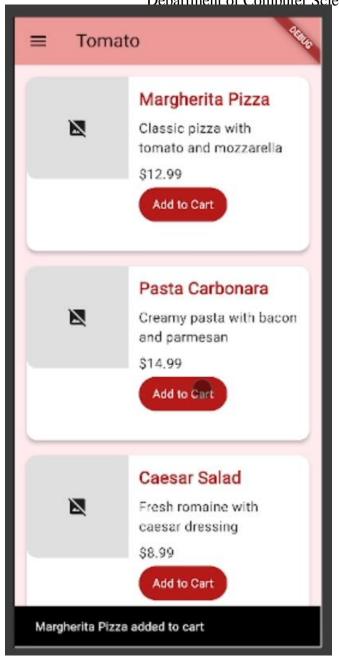


■ Tomato	Pierre
Name	
Address	
Contact No	-
Email	
Save Profile	

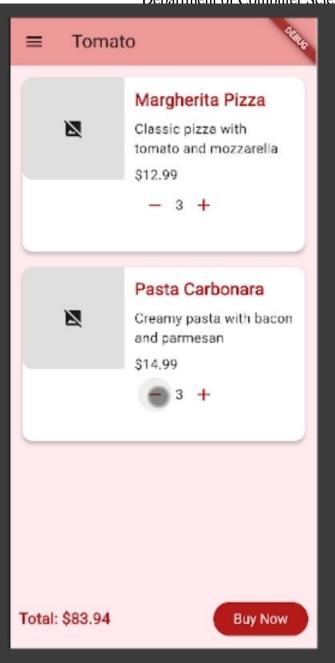














(Autonomous Institute Affiliated to University of Mumbai) Munshi Nagar, Andheri (W), Mumbai – 400 058.

