

# Flutter application documentation

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#activity was done on vs code and flutter was downloaded for mac os and imported via the python code

## Application brief:

The application is of a simple shopping cart that lets you add and subtract into cart based on the list of products available and prints the total at the bottom

At checkout the total is printed as order placed and the values reset to zero

## Python code preview:

```
1 import 'package:flutter/material.dart';
2
3 void main() => runApp(const MyApp());
4
5 class MyApp extends StatelessWidget {
6   const MyApp({super.key});
7   @override
8   Widget build(BuildContext context) {
9     return MaterialApp(
10       title: 'Basic Basket',
11       debugShowCheckedModeBanner: false,
12       theme: ThemeData(useMaterial3: true, colorSchemeSeed: Colors.indigo),
13       home: const ShopPage(),
14     );
15   }
16 }
17
```

## Full python code:

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

```
void main() => runApp(const MyApp());
```

```
class MyApp extends StatelessWidget {
  const MyApp({super.key});
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Basic Basket',
      debugShowCheckedModeBanner: false,
      theme: ThemeData(useMaterial3: true, colorSchemeSeed: Colors.indigo),
      home: const ShopPage(),
    );
  }
}
```

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

```

@override
State<ShopPage> createState() => _ShopPageState();
}

```

```

class _ShopPageState extends State<ShopPage> {

```

```

    final List<Map<String, dynamic>> products = [
        {'name': 'Headphones', 'price': 1999.0},
        {'name': 'Mouse', 'price': 799.0},
        {'name': 'Keyboard', 'price': 1299.0},
        {'name': 'USB-C Cable', 'price': 299.0},
        {'name': 'Power Bank', 'price': 1599.0},
    ];

```

```

    // cart: product index -> quantity
    final Map<int, int> cart = {};

```

```

    double get total {
        double t = 0;
        cart.forEach((i, q) {
            t += products[i]['price'] * q;
        });
        return t;
    }

```

```

    int qtyFor(int i) => cart[i] ?? 0;

```

```

    void add(int i) {
        setState(() {
            cart[i] = qtyFor(i) + 1;
        });
    }

```

```

    void removeOne(int i) {
        if (!cart.containsKey(i)) return;
        setState(() {
            final q = qtyFor(i) - 1;
            if (q <= 0) {
                cart.remove(i);
            } else {
                cart[i] = q;
            }
        });
    }

```

```

    void clearCart() {
        setState(() => cart.clear());
    }

```

```
}
```

```
@override
```

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

```
  return Scaffold(
```

```
    appBar: AppBar(title: const Text('Shopping Basket')),
```

```
    body: ListView.separated(
```

```
      padding: const EdgeInsets.all(12),
```

```
      itemCount: products.length,
```

```
      separatorBuilder: (_, __) => const SizedBox(height: 8),
```

```
      itemBuilder: (context, i) {
```

```
        final p = products[i];
```

```
        final q = qtyFor(i);
```

```
        return Card(
```

```
          child: ListTile(
```

```
            leading: const Icon(Icons.shopping_bag_outlined),
```

```
            title: Text(p['name']),
```

```
            subtitle: Text('₹${(p['price'] as double).toStringAsFixed(2)}'),
```

```
            trailing: Row(
```

```
              mainAxisAlignment: MainAxisAlignment.min,
```

```
              children: [
```

```
                IconButton(
```

```
                  tooltip: 'Remove',
```

```
                  icon: const Icon(Icons.remove_circle_outline),
```

```
                  onPressed: q > 0 ? () => removeOne(i) : null,
```

```
                ),
```

```
                Text('$q', style: const TextStyle(fontWeight: FontWeight.bold)),
```

```
                IconButton(
```

```
                  tooltip: 'Add',
```

```
                  icon: const Icon(Icons.add_circle_outline),
```

```
                  onPressed: () => add(i),
```

```
                ),
```

```
              ],
```

```
            ),
```

```
          ),
```

```
        );
```

```
      },
```

```
    ),
```

```
    bottomNavigationBar: Container(
```

```
      padding: const EdgeInsets.fromLTRB(16, 10, 16, 16),
```

```
      decoration: BoxDecoration(
```

```
        color: Theme.of(context).colorScheme.surfaceContainerHighest,
```

```
        border: Border(top: BorderSide(color: Colors.black12.withOpacity(0.06))),
```

```
      ),
```

```
      child: SafeArea(
```

```
        top: false,
```

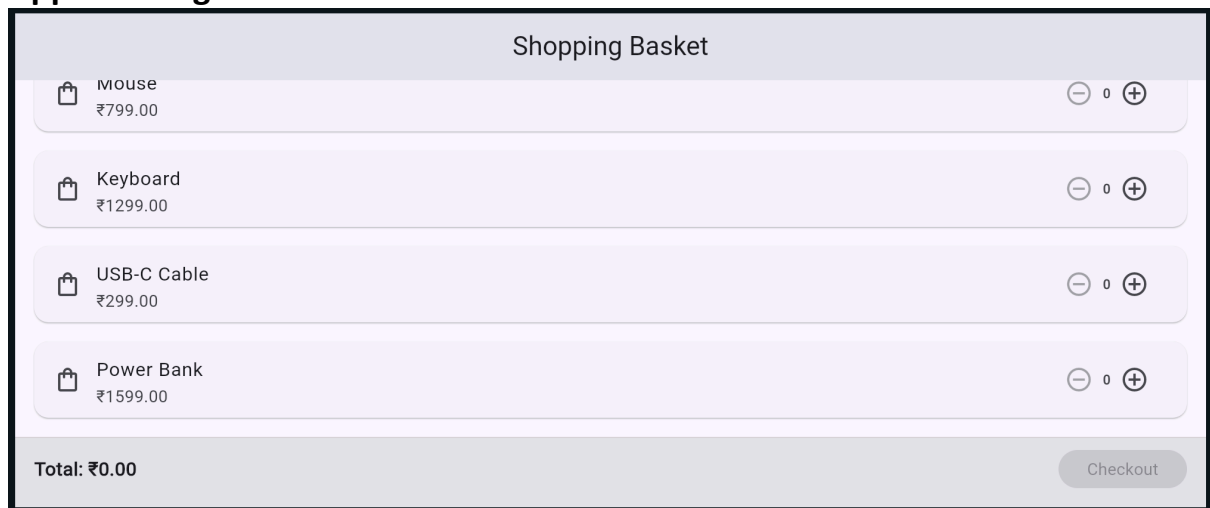
```
        child: Row(
```

```


children: [
  Expanded(
    child: Text(
      'Total: ₹${total.toStringAsFixed(2)}',
      style: const TextStyle(fontSize: 16, fontWeight: FontWeight.w800),
    ),
  ),
  FilledButton(
    onPressed: cart.isEmpty
      ? null
      : () {
        ScaffoldMessenger.of(context).showSnackBar(
          SnackBar(
            content: Text(
              'Order placed for ₹${total.toStringAsFixed(2)} 🎉',
            ),
          ),
        );
        clearCart();
      },
    child: const Text('Checkout'),
  ),
],

```

### Application generated:



Shopping Basket




Mouse

₹799.00

−

0

+




Keyboard

₹1299.00

−

2

+




USB-C Cable

₹299.00

−

1

+



Power Bank

₹1599.00

−


0

+

Total: ₹2897.00

Checkout

Shopping Basket




Mouse

₹799.00

−

0

+




Keyboard

₹1299.00

−

0

+




USB-C Cable

₹299.00

−

0

+



Power Bank

−

0

+

Order placed for ₹7191.00 🎉

Total: ₹0.00

Checkout