

Quiz

1.Which widget creates a fixed-height box that can be used to space other widgets?

- a) ListView
- b) Column
- c) SizedBox
- d) Wrap

Answer: c) SizedBox

2.Which widget provides a scrollable view for its child or children?

- a) ListView
- b) GridView
- c) SingleChildScrollView
- d) All of the above

Answer: d) All of the above

3.Which widget allows the user to input text?

- a) TextField
- b) RaisedButton
- c) IconButton
- d) SizedBox

Answer: a) TextField

4.Which widget is used to display a scrollable list of items?

- a) ListTile
- b) ListView
- c) Container
- d) Wrap

Answer: b) ListView

5.Which widget represents a single item in a list with a title and subtitle?

- a) ListTile
- b) ListView
- c) Container
- d) Row

Answer: a) ListTile

6.Which widget is used to display an image?

- a) FlatButton
- b) Icon
- c) Image
- d) IconData

Answer: c) Image

7.Which widget displays a material design icon?

- a) FlatButton
- b) Icon
- c) RaisedButton
- d) Container

Answer: b) Icon

8.Which widget automatically wraps its children to the next line if there is not enough horizontal space?

- a) Row
- b) Column
- c) Wrap
- d) Container

Answer: c) Wrap

9. Which code snippet correctly adds a custom colour to an ElevatedButton?

a)

```
ElevatedButton(  
  style: ElevatedButton.styleFrom(  
    primary: Colors.red,  
  ),  
  child: Text('Button'),  
)
```

b)

```
ElevatedButton(  
  color: Colors.red,  
  child: Text('Button'),  
)
```

c)

```
ElevatedButton(  
  style: ElevatedButton.style(  
    backgroundColor: Colors.red,  
  ),  
  child: Text('Button'),  
)
```

d)

```
ElevatedButton(  
  style: ElevatedButton.style(  
    backgroundColor: Colors.red,  
  ),  
  child: Text('Button'),  
)
```

```
background: Colors.red,  
child: Text('Button'),  
)
```

Answer: a)

```
ElevatedButton(  
  style: ElevatedButton.styleFrom(  
    primary: Colors.red,  
  ),  
  child: Text('Button'),  
)
```

10. Which of the following widgets have default elevation?

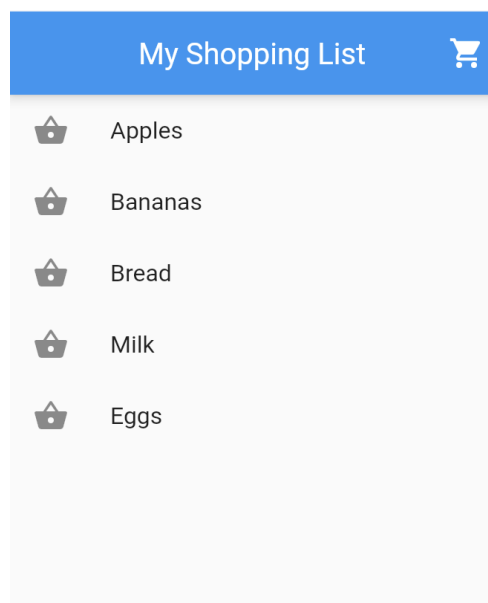
- a)AppBar
- b)FloatingActionButton
- c)ElevatedButton

d)All of the above

Answer: d) All of the above

Live Test

Create a single page that displays a list of items.



Requirements:

- The page should have a Scaffold as the root widget.
- Inside the Scaffold, create an AppBar with the title "My Shopping List".

- Below the AppBar, create a ListView widget to display the list of shopping items.
- Each item in the list should be represented by a ListTile widget.
- Each ListTile should display an icon on the left, followed by the name of the shopping item.
- The list should have at least 5 shopping items.
- Add appropriate padding, spacing, and styling to make the app visually appealing.
- Use the IconButton widget to add an icon button on the AppBar. When pressed, it should display a Snackbar with the message "Cart is empty".

Submission:

- Github repo link
- The **.readme** file in github must contain screenshots of the whole app

Solution:

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

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Shopping List',
      theme: ThemeData(
        primarySwatch: Colors.blue,
      ),
      home: ShoppingListPage(),
    );
  }
}

class ShoppingListPage extends StatelessWidget {
  final List<String> shoppingItems = [
    'Apples',
    'Bananas',
    'Bread',
    'Milk',
    'Eggs',
  ];
}
```

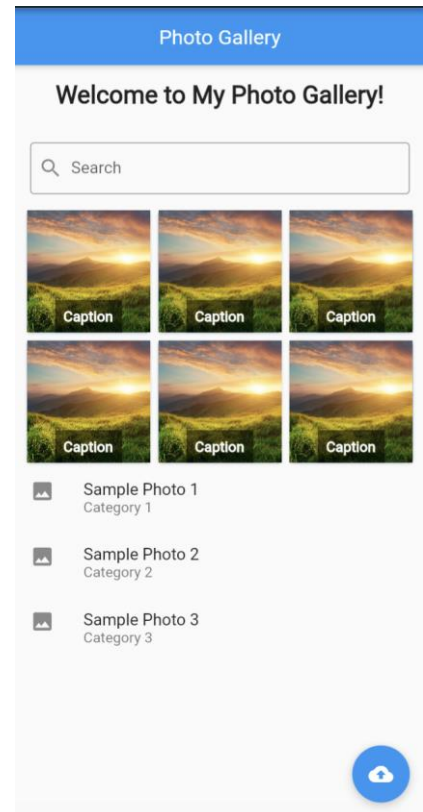
```

@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(
      title: const Text('My Shopping List'),
      actions: [
        IconButton(
          icon: const Icon(Icons.shopping_cart),
          onPressed: () {
            ScaffoldMessenger.of(context).showSnackBar(
              const SnackBar(content: Text('Cart is empty')),
            );
          },
        ),
      ],
    ),
    body: ListView.builder(
      itemCount: shoppingItems.length,
      itemBuilder: (context, index) {
        return ListTile(
          leading: const Icon(Icons.shopping_basket),
          title: Text(shoppingItems[index]),
        );
      },
    ),
  );
}

```

Assignment

- Create a Flutter app with a Scaffold as the root widget.
- Implement an AppBar at the top with a title "Photo Gallery".
- Inside the body of the Scaffold, create a SingleChildScrollView to enable scrolling.
- Within the SingleChildScrollView, create a Column widget.
- Inside the Column widget, add a Container to display a welcome message such as "Welcome to My Photo Gallery!".
- Below the welcome message, create a TextField for users to search for specific photos. Use appropriate styling and placeholder text. No search functionality needed just design the TextField.
- Implement a Wrap widget to display a grid of photos.
- The images must be Network Images. You can choose any network image as you like. There must be at least 6 images in the Wrap Widget.
- Each photo should be represented by an ElevatedButton or OutlineButton with an Image and caption below it.
- While clicking on each image there should be a Snackbar Showing message "Clicked on photo!".
- Add appropriate spacing and styling to the buttons, images, and captions.
- Use a ListView to display a list of ListTile widgets below the photo grid.
- Each ListTile should represent a photo with a title and a subtitle. Add at least three sample photos to the list.
- Implement a button, such as an IconButton, that when pressed, displays a Snackbar with the message "Photos Uploaded Successfully!".



Submission:

- Github repo link
- The **.readme** file in github must contain screenshots of the whole app

Solution:

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

void main() {
  runApp(PhotoGalleryApp());
}
```

```

class PhotoGalleryApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Photo Gallery',
      debugShowCheckedModeBanner: false,
      theme: ThemeData(
        primarySwatch: Colors.blue,
      ),
      home: PhotoGalleryPage(),
    );
  }
}

class PhotoGalleryPage extends StatelessWidget {
  final List<String> samplePhotos = [
    'https://media.istockphoto.com/id/517188688/photo/mountain-landscape.jpg?s=612x612&w=0&k=20&c=A63koPKaCyIwQWOTFBRWj_PwCrR4cEoOw2S9Q7yVl8=',
    'https://media.istockphoto.com/id/517188688/photo/mountain-landscape.jpg?s=612x612&w=0&k=20&c=A63koPKaCyIwQWOTFBRWj_PwCrR4cEoOw2S9Q7yVl8=',
    'https://media.istockphoto.com/id/517188688/photo/mountain-landscape.jpg?s=612x612&w=0&k=20&c=A63koPKaCyIwQWOTFBRWj_PwCrR4cEoOw2S9Q7yVl8=',
    'https://media.istockphoto.com/id/517188688/photo/mountain-landscape.jpg?s=612x612&w=0&k=20&c=A63koPKaCyIwQWOTFBRWj_PwCrR4cEoOw2S9Q7yVl8=',
    'https://media.istockphoto.com/id/517188688/photo/mountain-landscape.jpg?s=612x612&w=0&k=20&c=A63koPKaCyIwQWOTFBRWj_PwCrR4cEoOw2S9Q7yVl8=',
    'https://media.istockphoto.com/id/517188688/photo/mountain-landscape.jpg?s=612x612&w=0&k=20&c=A63koPKaCyIwQWOTFBRWj_PwCrR4cEoOw2S9Q7yVl8=',
  ];

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: const Text('Photo Gallery'),
      ),
      body: SingleChildScrollView(
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.center,
          children: [
            Container(
              padding: const EdgeInsets.all(16),
              child: const Text(
                'Welcome to My Photo Gallery!',
                style: TextStyle(
                  fontSize: 24,
                  fontWeight: FontWeight.bold,
                ),
              ),
            ),
            Container(

```

```
padding: const EdgeInsets.all(16),
child: const TextField(
  decoration: InputDecoration(
    labelText: 'Search',
    hintText: 'Enter search term',
    prefixIcon: Icon(Icons.search),
    border: OutlineInputBorder(),
  ),
),
),
Wrap(
  spacing: 8,
  runSpacing: 8,
  children: samplePhotos.map((photoUrl) {
    return ElevatedButton(
      onPressed: () {
        ScaffoldMessenger.of(context).showSnackBar(
          const SnackBar(content: Text('Clicked on image!')),
        );
      },
      style: ElevatedButton.styleFrom(
        padding: EdgeInsets.zero,
      ),
      child: Container(
        width: 120,
        height: 120,
        decoration: BoxDecoration(
          image: DecorationImage(
            image: NetworkImage(photoUrl),
            fit: BoxFit.cover,
          ),
        ),
      ),
      child: Align(
        alignment: Alignment.bottomCenter,
        child: Container(
          padding: const EdgeInsets.all(8),
          color: Colors.black54,
          child: const Text(
            'Caption',
            style: TextStyle(
              color: Colors.white,
              fontWeight: FontWeight.bold,
            ),
          ),
        ),
      ),
    ),
  }).toList(),
),
ListView(
  shrinkWrap: true,
  physics: const NeverScrollableScrollPhysics(),
  children: const [
    ListTile(
      leading: Icon(Icons.photo),
      title: Text('Sample Photo 1'),
      subtitle: Text('Category 1'),
```



```

    ),
    ListTile(
      leading: Icon(Icons.photo),
      title: Text('Sample Photo 2'),
      subtitle: Text('Category 2'),
    ),
    ListTile(
      leading: Icon(Icons.photo),
      title: Text('Sample Photo 3'),
      subtitle: Text('Category 3'),
    ),
  ],
),
),
),
),
floatingActionButton: FloatingActionButton(
  onPressed: () {
    ScaffoldMessenger.of(context).showSnackBar(
      const SnackBar(content: Text('Photos Uploaded
Successfully!')),
    );
  },
  child: const Icon(Icons.cloud_upload),
),
);
}
}
}

```