MAD LAB EXPT 4

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Aim: To make an interactive form using Widgets.

Theory:

Text Input Fields- Use the TextField widget to allow users to input text. You can customize it with properties like decoration, controller, keyboardType, validator, and onChanged callback.

Form Widget- Encapsulate your input fields within a Form widget. The Form widget manages the form state and provides methods for validation and submission.

Form Fields- Wrap each input field within a TextFormField widget. This widget integrates with the Form widget and automatically handles validation.

Validation-Implement validation logic to ensure that the user input meets certain criteria (e.g., required fields, valid email format). You can use the validator property of the TextFormField widget to specify validation functions.

State Management- Maintain the form's state using either StatefulWidget or state management solutions like Provider, Riverpod, or Bloc. When the user interacts with the form (e.g., typing in a text field), update the corresponding state.

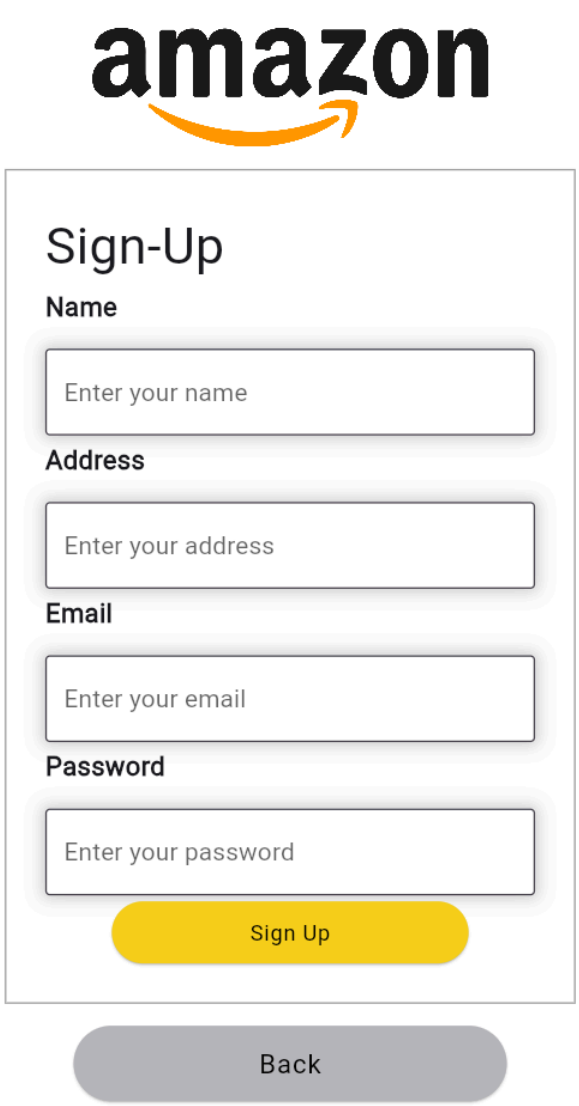
Submit Button- Include a button (e.g., ElevatedButton or TextButton) to allow users to submit the form. Disable the button if the form is invalid.

Handling Form Submission-Define a function to handle form submission. This function should be called when the user taps the submit button. You can access the form data using the FormState object.

Output:

```
import 'dart:math';
import 'dart:typed_data';

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

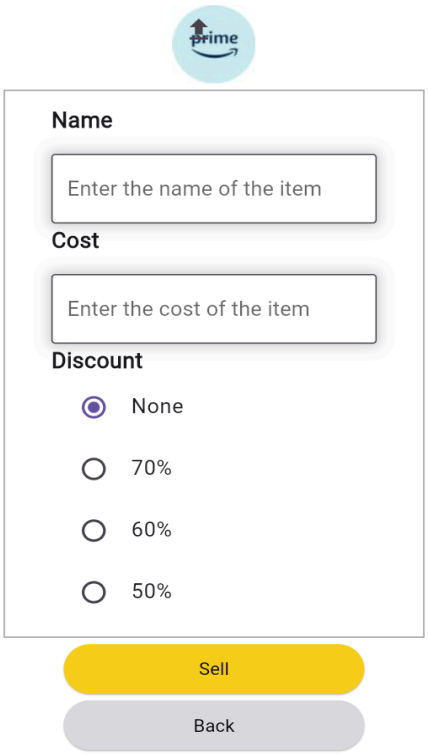
```
class Utils {
  Size getScreenSize() {
    return MediaQueryData.fromWindow(WidgetsBinding.instance!.window).size;
  }

  showSnackBar({required BuildContext context, required String content}) {
    ScaffoldMessenger.of(context).showSnackBar(
      SnackBar(
        backgroundColor: Colors.orange,
        shape: const RoundedRectangleBorder(
          borderRadius: BorderRadius.only(
            topLeft: Radius.circular(10),
            topRight: Radius.circular(10),
          ),
        ),
        content: SizedBox(
          width: getScreenSize().width,
          child: Row(
            mainAxisAlignment: MainAxisAlignment.center,
            children: [
              Text(
                content,
                maxLines: 2,
                overflow: TextOverflow.ellipsis,
              ),
            ],
          ),
        ),
      ),
    );
  }

  Future<Uint8List?> pickImage() async {
    ImagePicker picker = ImagePicker();
    XFile? file = await picker.pickImage(source: ImageSource.gallery);
    return file!.readAsBytes();
  }

  String getUid() {
    return (100000 + Random().nextInt(10000)).toString();
  }
}
```




```
class HomeScreen extends StatefulWidget {
  const HomeScreen({Key? key}) : super(key: key);

  @override
  State<HomeScreen> createState() => _HomeScreenState();
}

class _HomeScreenState extends State<HomeScreen> {
  ScrollController controller = ScrollController();
  double offset = 0;
  List<Widget>? discount70;
  List<Widget>? discount60;
  List<Widget>? discount50;
  List<Widget>? discount0;
```

```
@override
void initState() {
  super.initState();
  getData();
  controller.addListener(() {
    setState(() {
      offset = controller.position.pixels;
    });
  });
}

@override
void dispose() {
  super.dispose();
  controller.dispose();
}

void getData() async {
  List<Widget> temp70 =
      await CloudFirestoreClass().getProductsFromDiscount(70);
  List<Widget> temp60 =
      await CloudFirestoreClass().getProductsFromDiscount(60);
  List<Widget> temp50 =
      await CloudFirestoreClass().getProductsFromDiscount(50);
  List<Widget> temp0 = await CloudFirestoreClass().getProductsFromDiscount(0);
  print("everything is done");
  setState(() {
    discount70 = temp70;
    discount60 = temp60;
    discount50 = temp50;
    discount0 = temp0;
  });
}

@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: SearchBarWidget(
      isReadOnly: true,
      hasBackButton: false,
    ),
    body: discount70 != null &&
          discount60 != null &&
```

```
          discount50 != null &&
          discount0 != null
        ? Stack(
          children: [
            SingleChildScrollView(
              controller: controller,
              child: Column(
                children: [
                  SizedBox(
                    height: kAppBarHeight / 2,
                  ),
                  CategoriesHorizontalListViewBar(),
                  AdBannerWidget(),
                  ProductsShowcaseListView(
                      title: "Upto 70% Off", children: discount70!),
                  ProductsShowcaseListView(
                      title: "Upto 60% Off", children: discount60!),
                  ProductsShowcaseListView(
                      title: "Upto 50% Off", children: discount50!),
                  ProductsShowcaseListView(
                      title: "Explore", children: discount0!),
                ],
              ),
            ),
            UserDetailsBar(
              offset: offset,
            ),
          ],
        )
        : const LoadingWidget(),
    );
  }}
```



Conclusion: An interactive form using Widgets has been created in Flutter application.