

**MOBIL ILOVALAR YARATISHDA BOSHQARUV
ELEMENTLARIDAN FOYDALANISH**

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Annotatsiya: Bu maqolada mobil ilovalar yaratish uchun zarur bo'lgan boshqaruv elementlari haqida ma'lumotlar keltirilgan.

Kalit so'zlar: Mobil ilova, boshqaruv elementi, UI controls, widget, widgetlar daraxti, ko'rinadigan va ko'rinmaydigan widgetlar, layout, Container, Text, Column, Row, Image, CircleAvatar, Icon, Button va boshqa widgetlar.

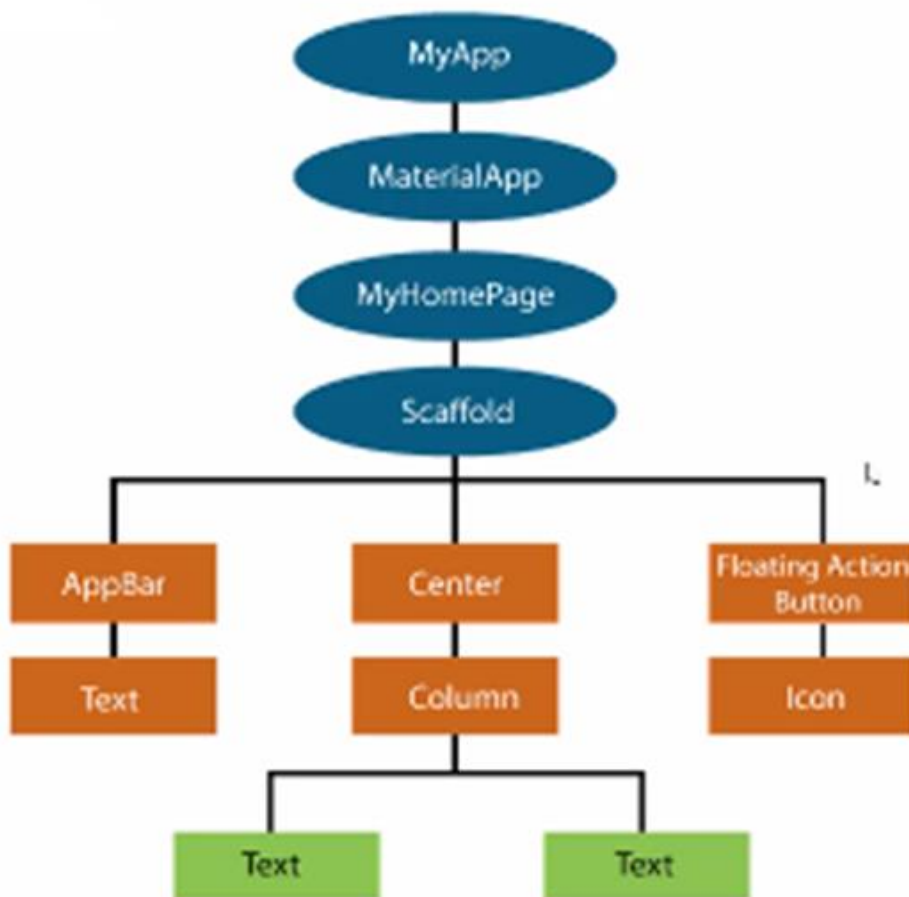
Mobil ilovalar yaratishda boshqaruv elementlaridan foydalanish muhim ahamiyatga ega. chunki yaratilayotgan ilovalarda ui controls ya'ni foydalanuvchi interfeysi boshqaruv elementlaridan foydalanib mobil ilova interfeysi shakllantiriladi[1-3].

Quyidagi rasmda mobil ilovalar yaratishda foydalaniladigan boshqaruv elementlari tasvirlangan:



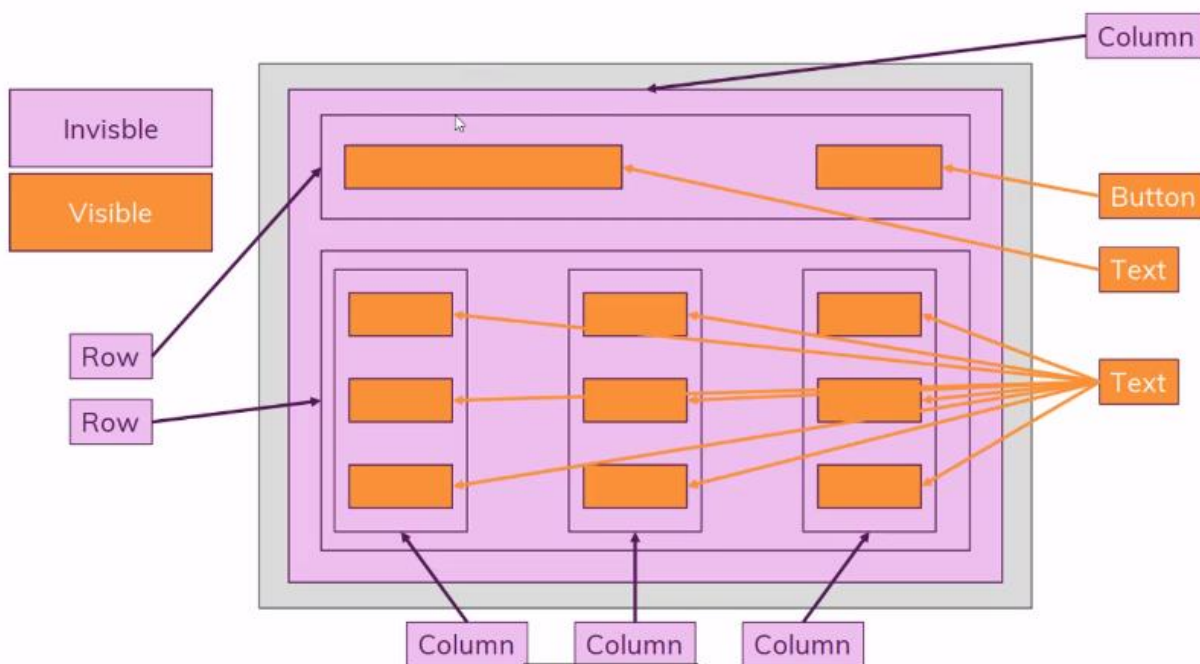
1-rasm. Android platformasida foydalanuvchi interfeysi boshqaruv elementlari.

Flutter freymworkida mobil ilovalar ishlab chiqishda bevosita barcha boshqaruv elementlari widgetlardan tashkil topadi. Widgetlar daraxti quyidagicha tasvirlanadi:



2-rasm. Widgetlar daraxti.

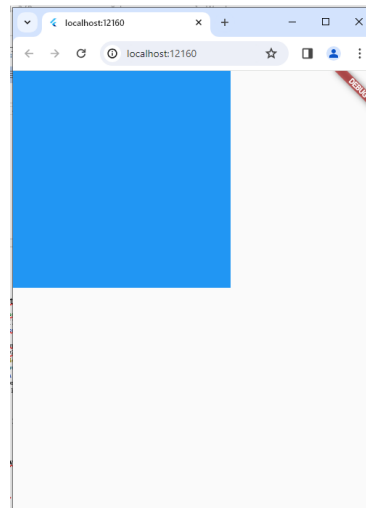
Shuningdek widgetlar foydalanilishiga ko'ra ikki turga bo'linadi.



3-rasm. Widget turlari

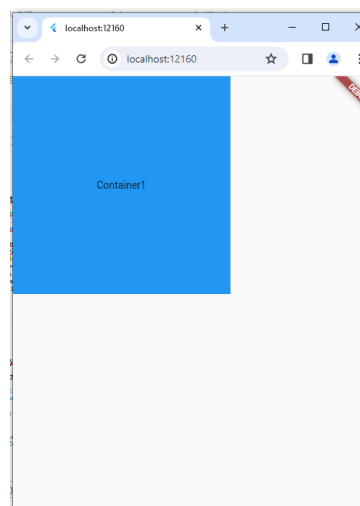
Flutterda Container widget quyidagicha tasvirlanadi:

```
import 'package:flutter/material.dart';
void main() {
  runApp(const MyApp());
}
class MyApp extends StatelessWidget {
  const MyApp();
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        body: Container(
          color: Colors.blue,
          height: 300,
          width: 300,
        ),
      ),
    );
  }
}
```



Bu yerda widget ko'rinadigan widget bo'lib, Container widgetini ichida Text widget quyidagicha ifodalanadi:

```
      home: Scaffold(
        body: Container(
          color: Colors.blue,
          height: 300,
          width: 300,
          child: Center(
            child: Text(
              'Container1'
            ),
          ),
        ),
      ),
    );
  }
}
```



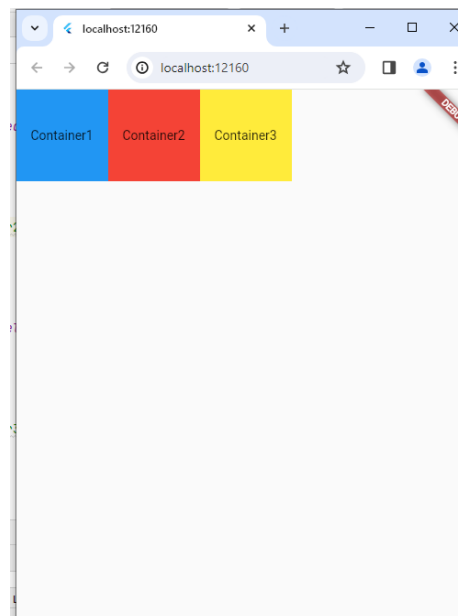
Bu yerda Container, Text widgetlari ko'rinadigan widget hisoblanib, Center widget esa ko'rinmaydigan widget hisoblanadi[4-5].

Row widget bevosita ma'lumotlarni qator ko'rinishida chiqarish uchun ishlatiladi.

```

body: Row(
children: [
  Container(
    color: Colors.blue,
    height: 100,
    width: 100,
    child: Center(
      child: Text(
        'Container1'
      ),
    ),
  ),
  Container(
    color: Colors.red,
    height: 100,
    width: 100,
    child: Center(
      child: Text(
        'Container2'
      ),
    ),
  ),
  Container(
    color: Colors.yellow,
    height: 100,
    width: 100,
    child: Center(
      child: Text(
        'Container3'
      ),
    ),
  ),
],
),

```



Bu yerda foydalanilayotgan Row widgeti uchta Container widgetini bitta qatorga chiqarish uchun ishlatildi[6,7].

Quyidagi mobil ilovani yaratishda CircleAvator, Icon va boshqa widgetlarni ishlatiladi.

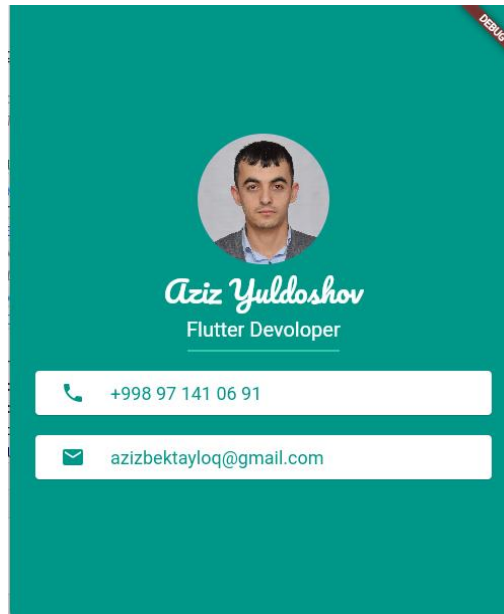
```
import 'package:flutter/material.dart';
void main() {
  runApp(const MyApp());
}
class MyApp extends StatelessWidget {
  const MyApp({super.key});
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        backgroundColor: Colors.teal,
        body: SafeArea(
          child: Column(
            mainAxisAlignment: MainAxisAlignment.center,
            children: <Widget>[
              CircleAvatar(
                backgroundImage: AssetImage('Rasmlar/Aziz.jpg'),
                radius: 65.0,
              ),
              Text(
                'Aziz Yuldoshov',
                style: TextStyle(
                  color: Colors.white,
                  fontSize: 30.0,
                  fontFamily: 'Pacifico',
                ),
              ),
              Text(
                'Flutter Developer',
                style: TextStyle(
                  color: Colors.white,
                  fontSize: 20.0,
                ),
              ),
              SizedBox(height: 20.0,width: 150.0,
                child: Divider(color: Colors.tealAccent,)),
              Card(
                margin: EdgeInsets.symmetric(horizontal: 25.0, vertical: 10.0,),
                color: Colors.white,
```

```

child: Padding(
  padding: EdgeInsets.symmetric(horizontal: 25.0, vertical: 10.0,),
  child: Row(
    children: <Widget>[
      Icon(Icons.phone, color: Colors.teal,),
      SizedBox(width: 25.0),
      Text('+998 97 141 06 91',style: TextStyle(color: Colors.teal,
fontSize: 18.0,)),
    ],
  ),
),
),
),
Card(
  margin: EdgeInsets.symmetric(horizontal: 25.0, vertical: 10.0,),
  color: Colors.white,
  child: Padding(
    padding: EdgeInsets.symmetric(horizontal: 25.0, vertical: 10.0,),
    child: Row(
      children: <Widget>[
        Icon(Icons.mail, color: Colors.teal,),
        SizedBox(width: 25.0),
        Text('azizbektayloq@gmail.com',style: TextStyle(color:
Colors.teal, fontSize: 18.0,)),
      ],
    ),
  ),
),
);
}
}

```

Flutter freymworkida yozilgan yuqoridagi kod natijasi quyidagi ko'rinishga ega bo'ladi:



4-rasm. Flutter freymworkida widgetlarni ishlatilishi

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6. Khodzhaev Shukhrat Tolibovich, Yuldoshov Aziz Khujamurodovich, Khodzhaev Tolib Tohirovich. Program for Calculation of the Optimal Distribution of the Planned Amount of Gas on the Gas Supply Network, 2021 International Conference on Information Science and Communications Technologies (ICISCT). 2021/11/3, 1-4 pages.
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