

MaterialApp class in Flutter

MaterialApp Class: MaterialApp is a predefined class or widget in a flutter. It is likely the main or core component of a flutter app. The MaterialApp widget provides a wrapper around other Material Widgets. We can access all the other components and widgets provided by Flutter SDK. Text

widget, **DropDownButton** widget, **AppBar** widget, **Scaffold** widget, **ListView** widget, **StatelessWidget**, **StatefulWidget**, **TextField** widget, **Padding** widget, **ThemeData** widget, etc. are the widgets that can be accessed using MaterialApp class. There are many more widgets that are accessed using MaterialApp class. Using this widget, we can make an attractive app that follows the Material Design guidelines.

Here is the constructor of MaterialApp class:

Constructor of MaterialApp class

```
const MaterialApp(  
  {Key key,  
  GlobalKey<NavigatorState> navigatorKey,  
  Widget home,  
  Map<String, WidgetBuilder> routes: const <String, WidgetBuilder>{},  
  String initialRoute,  
  RouteFactory onGenerateRoute,  
  InitialRouteListFactory onGenerateInitialRoutes,  
  RouteFactory onUnknownRoute,  
  List<NavigatorObserver> navigatorObservers: const <NavigatorObserver>[],  
  TransitionBuilder builder,  
  String title: '',  
  GenerateAppTitle onGenerateTitle,  
  Color color,  
  ThemeData theme,  
  ThemeData darkTheme,  
  ThemeData highContrastTheme,  
  ThemeData highContrastDarkTheme,  
  ThemeMode themeMode: ThemeMode.system,  
  Locale locale,  
  Iterable<LocalizationsDelegate> localizationsDelegates,  
  LocaleListResolutionCallback localeListResolutionCallback,  
  LocaleResolutionCallback localeResolutionCallback,  
  Iterable<Locale> supportedLocales: const <Locale>[Locale('en', 'US')],  
  bool debugShowMaterialGrid: false,  
  bool showPerformanceOverlay: false,  
  bool checkerboardRasterCacheImages: false,  
  bool checkerboardOffscreenLayers: false,  
  bool showSemanticsDebugger: false,  
  bool debugShowCheckedModeBanner: true,  
  Map<LogicalKeySet, Intent> shortcuts,  
  Map<Type, Action<Intent>> actions}  
)
```

Properties of MaterialApp widget:

- **action:** This property takes in *Map<Type, Action<Intent>>* as the object. It controls intent keys.
- **backButtonDispatcher:** It decided how to handle the back button.
- **checkerboardRasterCacheImage:** This property takes in a boolean as the object. If set to true it turns on the checkerboarding of raster cache images.
- **color:** It controls the primary color used in the application.
- **darkTheme:** It provided theme data for the dark theme for the application.

- **debugShowCheckedModeBanner:** This property takes in a *boolean* as the object to decide whether to show the debug banner or not.
- **debugShowMaterialGrid:** This property takes a *boolean* as the object. If set to true it paints a baseline grid material app.
- **highContrastDarkTheme:** It provides the theme data to use for the high contrast theme.
- **home:** This property takes in *Widget* as the object to show on the default route of the app.
- **initialRoute:** This property takes in a *string* as the object to give the name of the first route in which the navigator is built.
- **locale:** It provides a locale for the *MaterialApp*.
- **localizationsDelegate:** This provides a delegate for the locales.
- **navigatorObserver:** It takes in *GlobalKey<NavigatorState>* as the object to generate a key when building a navigator.
- **navigatorObservers:** This property holds *List<NavigatorObserver>* as the object to create a list of observers for the navigator.
- **onGenerateInitialRoutes:** This property takes in *InitialRouteListFactory* *typedef* as the object to generate initial routes.
- **onGenerateRoute:** The *onGenerateRoute* takes in a *RouteFactory* as the object. It is used when the app is navigated to a named route.
- **onGenerateTitle:** This property takes in *RouteFactory* *typedef* as the object to generate a title string for the application if provided.
- **onUnknownRoute:** The *onUnknownRoute* takes in *RouteFactory* *typedef* as the object to provide a route in case of failure in other methods.
- **routeInformationParser:** This property holds *RouteInformationParser<T>* as the object to parse the routing information from the *RouteInformationProvider* into a generic data type.
- **routeInformationProvider:** This property takes in *RouteInformationProvider* class as the object. It is responsible for providing routing information.
- **routeDelegate:** This property takes in *RouterDelegate<T>* as the object to configure a given widget.
- **routes:** The *routes* property takes in *LogicalKeySet* class as the object to control the app's topmost level routing.
- **shortcuts:** This property takes in *LogicalKeySet* class as the object to decide the keyboard shortcut for the application.
- **showPerformanceOverlay:** The *showPerformanceOverlay* takes in a *boolean* value as the object to turn on or off performance overlay.
- **showSemanticsDebugger:** This property takes in a *boolean* as the object. If set to true, it shows some accessible information.
- **supportedLocales:** The *supportedLocales* property keeps hold of the locales used in the app by taking in *Iterable<E>* class as the object.
- **theme:** This property takes in *ThemeData* class as the object to describe the theme for the *MaterialApp*.
- **themeMode:** This property holds *ThemeMode* *enum* as the object to decide the theme for the material app.
- **title:** The *title* property takes in a *string* as the object to decide the one-line description of the app for the device.