# Indice generale

**Introduzione ..... ix**

Nativo e ibrido ..... x
Punti di forza ..... xii
Benchmark ..... xii
Look and feel ..... xiii
Adoption ..... xiv
A chi è rivolto Flutter ..... xv
I revisori ..... xvii
Il codice ..... xvii
Ringraziamenti ..... xvii

**Capitolo 1 Installazione ..... 1**

Flutter doctor ..... 2
Android ..... 3
iOS ..... 6
Emulazione ..... 7
ADV ..... 7
Simulator ..... 9

**Capitolo 2 Hello world ..... 11**

Desktop ..... 12
Browser ..... 14
Device ..... 15
Android ..... 15
iOS ..... 17
Hello World ..... 18
Progetto ..... 19
Build ..... 20
Debug ..... 20
Release ..... 20
Profile ..... 20

**Capitolo 3 Dart in teoria .....21**

Aspetti peculiari.....22
Esecuzione.....23
From-source.....23
Snapshot.....25
Self-contained executables.....28
Dart JS.....28
Mobile.....28
Release.....28
Development.....28
Flutter.....29
Architettura.....29

**Capitolo 4 Linguaggio .....33**

Aspetti peculiari.....33
Variabili.....34
var.....34
dynamic.....34
const.....35
final.....35
late.....35
null safety.....35
Tipi di dati.....36
Numeri.....36
Stringhe.....38
Booleani.....38
Liste.....39
Mappe.....39
Set.....40
Generici.....41
Funzioni.....41
main.....42
Lambda.....42
Scope.....43
Closure.....43
Arrow syntax.....44
Classi.....44
Costruttore.....45
This.....46
Static.....46
Getter/Setter.....47
Ereditarietà.....47
Istruzioni di controllo.....52
Eccezioni.....54
Moduli.....55
Iterable.....56

Operazioni asincrone ....56
Future ....57
Stream ....59

**Capitolo 5 Widget ....65**

MyApp widget ....67
Super initializer ....67
Build ....68
Material design ....68
MyHomePage widget ....69
Widget ....71
StatelessWidget ....72
StatefulWidget ....75
Lifecycle ....76
createState ....81
initState ....81
didChangeDependencies ....82
build ....82
didUpdateWidget ....82
dispose ....83
deactivate/activate ....83
Widget Base ....83
Text ....84
Row ....85
Column ....86
Container ....87
Stack ....89

**Capitolo 6 Routing ....91**

Navigator ....91
Named Routes ....95
Passaggio dati ....96
Navigator 2.0 ....98
Homepage ....102
Location ....102
Sub-Routes ....102
Parametri ....103
Named Router ....105
Redirect ....105
Deep linking ....106
Android ....106
iOS ....107

**Capitolo 7 Widget Material Design ....109**

Material ....109
MaterialApp ....109

Scaffold ..... 112
TabBar ..... 120
Dialog ..... 125
Panel ..... 128
Visualizzazione dati ..... 135
Bottoni ..... 141
Input ..... 146

**Capitolo 8 Scrollable Widget ..... 151**

Scroll ..... 151
SingleChildScrollView ..... 153
ListView, GridView ..... 154
PageView ..... 158
CustomScrollView ..... 159
DraggableScrollableSheet ..... 161
NestedScrollView ..... 163
Scrollbar ..... 166
ScrollController ..... 167
ReorderableListView ..... 168

**Capitolo 9 Layout Widget ..... 171**

Vincoli ..... 171
Single-child ..... 172
Container ..... 172
Sizedbox ..... 176
Center ..... 176
Padding ..... 179
Align ..... 179
AspectRatio ..... 180
Baseline ..... 181
ConstrainedBox ..... 182
UnconstrainedBox e LimitedBox ..... 182
Transform ..... 182
CustomSingleChildLayout ..... 183
Expanded ..... 185
FittedBox ..... 185
FractionallySizedBox ..... 186
Offstage ..... 187
OverflowBox ..... 187
SizedOverflowBox ..... 188
IntrinsicHeight e IntrinsicWidth ..... 189
Multi-child ..... 189
Row ..... 189
Column ..... 193
Flex ..... 194
Stack ..... 195
IndexedStack ..... 196

Table ....198
Wrap ....199
CustomMultiChildLayout ....201
LayoutBuilder ....202
Flow ....204

**Capitolo 10 Animazioni ....209**

Controller ....209
Ticker ....210
Tipologie ....213
Physics ....214
Tween ....216
Curve ....217

**Capitolo 11 Gesture ....219**

GestureDetector ....219
Advanced Gesture ....222
InkWell ....223

**Capitolo 12 Demo ....225**

API Platform ....227
Geolocation ....227
Custom Icons ....232
Http ....233
Struttura ....234
main.dart ....235
screens/home_screen.dart ....236
services/get_position.dart ....238
screens/current_screen.dart ....239
services/open_meteo.dart ....241
Modello dati ....243
models/weather.dart ....243
screens/forecast_screen.dart ....247
Release ....250
iOS ....251
Profile ....251
Esercizi per casa ....252

**Capitolo 13 Test ....253**

Unit Test ....254
Widget Test ....257
Mock ....259
Integration Test ....262
Profile ....263
Coverage ....265

**Capitolo 14 Rendering ..... 267**

Widget tree ..... 267
Element tree ..... 270
RenderObject tree ..... 274
Keys ..... 276
GlobalKey ..... 280
RepaintBoundary ..... 282
CustomPainter ..... 284

**Capitolo 15 Layout Design ..... 289**

Responsive ..... 289
SafeArea ..... 290
MediaQuery ..... 291
OrientationBuilder ..... 294
AspectRatio, FractionallySizedBox ..... 294
Flexible ..... 294
Percentuali ..... 297
LayoutBuilder ..... 300
Adaptive ..... 301

**Capitolo 16 State Management ..... 303**

Design pattern ..... 303
Callback ..... 304
SharedAppData ..... 305
InheritedWidget ..... 307
Provider ..... 309
Provider.of ..... 312
Watch ..... 313
BLoC ..... 314
Redux ..... 315

**Capitolo 17 Approfondimenti ..... 317**

Cupertino widgets ..... 318
Data storage ..... 320
Deploy ..... 322
Offuscamento ..... 322
Signature ..... 323
Continuous delivery ..... 323
Firebase ..... 323
Biometria ..... 323

**Risorse utili ..... 325**

**Indice analitico ..... 327**