Flutter Cross-platform UI toolkit

CONCEPTS

Press r in a flutter run session to hot reload; state is kept. R restarts and resets state.

Edit Dart code
↓ save / r
Hot reload keeps state
↓ R
Hot restart fresh state
↓ flutter build
Release apk / ipa / web

PROJECT

flutter create *<name>*
Create a new app

flutter create --platforms=android,web .
Create into current dir for chosen platforms

flutter create --template=package *<name>*
Create a Dart package

flutter create --org *<com.example>* *<name>*
Set the reverse-domain org id

flutter clean
Delete build/ and .dart_tool/

RUN AND DEBUG

flutter run
Run the app on the selected device

flutter run -d *<device-id>*
Pick a device

flutter run -t *<file.dart>*
Use another entrypoint

flutter run --release
Run an optimized build

flutter run --profile
Profile performance on a real device

flutter run --flavor *<name>*
Build a flavor / scheme

flutter run --dart-define=*<K>***=***<V>*
Pass a compile-time constant

flutter logs
Stream device logs

IN A RUN SESSION

r
Hot reload

R
Hot restart

q
Quit and stop the app

h
List all session commands

w
Dump the widget hierarchy

DEVICES

flutter devices
List connected devices

flutter emulators
List available emulators

flutter emulators --launch *<id>*
Start an emulator

PACKAGES

flutter pub get
Fetch dependencies

flutter pub add *<pkg>*
Add a dependency

flutter pub add dev:*<pkg>*
Add a dev dependency

flutter pub remove *<pkg>*
Remove a dependency

flutter pub upgrade
Upgrade within constraints

flutter pub upgrade --major-versions
Raise constraints to latest majors

flutter pub outdated
Show packages with newer versions

flutter pub run build_runner build
Run code generation

TEST AND ANALYZE

flutter test
Run all tests in test/

flutter test *<path/to/file_test.dart>*
Run one test file

TEST AND ANALYZE (cont.)

flutter test --plain-name *<text>*
Run tests by name substring

flutter test --name *<regex>*
Run tests matching a regex

flutter test --coverage
Write coverage/lcov.info

flutter test --update-goldens
Regenerate golden images

flutter test integration_test -d *<id>*
Run integration tests on a device

flutter analyze
Static analysis

dart format .
Format all Dart files

dart fix --apply
Apply automated lint fixes

BUILD

flutter build apk
Android APK

flutter build appbundle
Android App Bundle for Play

flutter build ios
iOS build (macOS only)

flutter build ipa
iOS archive for the App Store

flutter build web
Web build into build/web

flutter build linux
Linux desktop build

SDK AND SETUP

flutter doctor
Check toolchain and platforms

flutter doctor -v
Detailed doctor output

flutter doctor --android-licenses
Accept Android SDK licenses

flutter --version
Show SDK, engine, Dart versions

flutter upgrade
Upgrade the SDK