*Dart programming language. Flutter cross-platform framework.*

About Dart and Flutter

Dart programming language was created in 2011 by Google. This language was created in order to replace the notorious JavaScript, because this language has fundamental unfixable errors, as one of Dart developers said. The first stable version of Dart was released in November 2013. The language is very young compared to JavaScript or other popular languages. A popular cross-platform mobile Flutter framework was written on Dart basis.

Flutter is a framework for creating iOS, Android and web apps. First stable version was released in May 2017, while the very first version called Sky (it worked for Android only) – in 2015.

It is also important to mention that Flutter and Dart are opensource technologies.

Useful links

<https://dart.dev/> - official language page with documentation, download instructions and common links

<https://dartpad.dev/> - online Dart compilator

<https://flutter.dev/docs/get-started/install> - download Dart and Flutter (there is no reason for Dart separate download, because Flutter SDK includes a complete Dart SDK)

Installing Dart and Flutter

To install Dart and Flutter, go to Flutter official website (you can see the link in the previous chapter) and press “Get Started” button in the top right corner of the page.

Graphical user interface, application

Description automatically generated

On this page you should choose your operation system. In the course we are going to use Windows and code editor Visual Studio Code, because it allows to practice with terminal and understand Dart and Flutter commands and how they work. However, we are going to see the installation process on Windows, macOS and Linux with help of the terminal.

Android Studio

Before installing Flutter and Dart, you should install Android Studio. During installing process, you will get special Android SDKs that will be needed for Android development.

Windows

First you need to be sure that you have Git installed on your computer. If not, download it from <https://git-scm.com/downloads>.

As Flutter is opensource, it can be easily downloaded from GitHub. To do it, you need to choose a folder where Flutter code will be kept, open terminal from this folder and execute the command below.

git clone https://github.com/flutter/flutter.git -b stable\

After executing this command, you will be able to run Flutter commands, but only in the Flutter console. To enable Flutter and Dart commands in the terminal, you need to add path to bin folder of Flutter to environment variables.

In Windows search write “env” and open “Edit environment variables for your account”.

Graphical user interface, text, application, chat or text message

Description automatically generated

In user variables add “New” and add path to the bin folder in Flutter folder. Example: D:/src/flutter/bin.

Graphical user interface, application

Description automatically generated

Now you can use Flutter and Dart commands in Windows terminal. You should test that everything works by entering “flutter” command. After that you should see something similar:

Text

Description automatically generated

macOS

Linux (Ubuntu 20.04)

Visual Studio Code

A screenshot of a computer

Description automatically generated with medium confidence

Dart basics

Program “Hello, World!”

Variables

Input and output