

# How to Install Qiskit

Taken from <https://qiskit.org/documentation/install.html>

## What is Qiskit?

Qiskit is a Python Library. Qiskit is an open-source quantum computing software development framework created by IBM for leveraging today's quantum processors in research, education, and business.

Qiskit is divided into 4 elements each with a different purpose:

- Terra - Constructing quantum circuits to run on real quantum chips.
- Aer - Simulating quantum circuits on classical computers.
- Aqua - Contains a variety of quantum algorithms.
- Ignis - Experiments for understanding and mitigating noise.

## Prerequisites

First you should have Python 3.5, 3.6, or 3.7 installed from <https://www.python.org/downloads/>. There appears to be a problem version 3.8, if you already have this version either downgrade or use Anaconda.

Windows users are recommended to install from the windows store. (Just search Python 3.7).

## Anaconda (Optional)

Anaconda is a Python data science platform used to create separate environments for Python projects. IBM recommends using Anaconda but it is not required.

```
Mac/Linux:  conda create -n name_of_env python=3
              source activate name_of_env
```

```
Windows:    conda create -n name_of_env python=3
              activate name_of_env
```

## Installation

Using Python's package manager named PIP we can install Qiskit. PIP is included with Python 3.4 or later by default.

```
Mac/Linux/Windows: pip install qiskit
```

## Getting Started

Qiskit is now installed. To include it, write `import qiskit` at the top of your python program.

To run the program you could execute it from your Python IDE or

```
Mac/Linux: python3 my_file_name.py
```

```
Windows: py my_file_name.py
```