

Program-10

Working of Computational Software

Sagemath is a free open-source mathematical software system based on the Python programming language. Originally created for research into Mathematics, it has been evolving into a powerful tool for

Math education. It combines numerous other mathematical software packages with a single interface, using Python.

By learning SageMath, you are also learning a lot about Python.

As an open source project, SageMath invites contributions from all of its users. This tutorial is one of many sources of information for learning about how to use SageMath. For more information see the SageMath project's website.

This tutorial assumes that the reader has access to a running copy of SageMath. On most operating systems, installing

SageMath usually consists of downloading the proper package from the project's main website, unwrapping it, and

executing sage from within. For more information on the process of installing sage see SageMath's Installation Guide.

A good alternative is to run SageMath in the cloud using Cocalc. All you need to do is either sign up for a free account or sign in through a

If you opted for the physical installation and started SageMath, you should know that there are two ways to enter commands: either from the command line or by using the web-based notebook. The notebook interface is similar in

design to the interface of Matlab, Mathematica, or Maple and is a popular choice.

Everything that follows the sage: prompt is a command that we encourage the reader to type in on

their own.

For example, if we wanted to factor the integer 1438880 we would give the following example using SageMath's `factor()` command.