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
Google/Github/Facebook/Twitter account. Once you are signed up, you can start a project using SageMath, and also share it with other users. For more information about Cocalc and its features, visit Cocalc Tutorial.
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.