Protocol 1\_Preparing a virtual environment to run SampleMiner software.

1. Preparing the virtual “SampleMiner” environment:
   1. Download Anaconda Navigator from anaconda.com.
   2. Install Anaconda Navigator following the provided on-screen instructions.
   3. Run Anaconda Navigator.
   4. Click the “Environments” tag on the left panel of the navigator’s “Home” screen.
   5. Click the “Create” icon at the bottom of the right panel of the “Environments” window.
   6. Input “SampleMiner” in the “Name” field of the “Create new environment” dialog box. Accept the default Python 3 version offered in that dialog box. Click the “Create” button at the bottom right of the dialog box.
   7. The environment will be created with several default packages installed. This process may take several minutes.
   8. Select the “SampleMIner” environment on the right panel of the “Environments” window, then click the “Channels” button located at the top of the right panel.
   9. With the pop-up “Channels” dialog box open, click the “Add…” button.
   10. In the input field that will appear at the bottom of the “Channels” dialog box enter the name of each source channel of software packages that will be used to download the external dependencies necessary for running SampleMiner, then click enter. The three channels below should be entered separately:
       * + github;
         + bioconda;
         + conda-forge.
   11. After adding the channels to the “SampleMiner” environment, click the button “update channels” at the bottom of the “Channels” dialog box.
   12. Select “Not installed” in the drop-down menu at the top of the “SampleMiner” environment panel.
   13. Separately search for then install each SampleMiner dependency among not installed packages of the channels added to the “SampleMiner” environment. Note that it is not necessary to search the dependencies by channel, since all channels will be automatically scanned. In this process, enter the name of the dependency in the “Search Packages” field at the top right of the “SampleMiner” environment panel; identify and mark the correct dependency among the choices displayed in the panel; click the “Apply” button at the bottom right of the panel. The dependencies below should be entered separately:
       * + biopython;
         + pandas;
         + matplotlib.
   14. During installation of the dependencies, all necessary packages they require to run will also be installed automatically in the environment.
   15. The “SampleMiner” anaconda environment is now ready to run SampleMiner.