# Automation-of-ParaView-with-Python

A Quick Guide to Automation Programming with Python in ParaView

In some projects, scholars need to repeatedly run the same procedure in ParaView with different files. Doing this manually can be time-consuming and exhausting. However, ParaView offers a built-in function that allows you to automate these tasks using Python.

**Step1:**

ParaView provides an option to automatically generate Python code as you perform tasks step by step. By going to **Tool > Start** Trace, ParaView will record all your actions during a full session and convert them into Python code line by line.

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**Step2:**

At this level, "**Trace Options**" step, there are different options for tracing and creating the Python code.

**General options:**

There are three different options here:

- All properties

- any \*modified properties

- only \*user-modified\* properties

Usually for most heat-transfer projects I used the second option which only trace the main objects and create a thorough code.

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**Step3:**

From this point onward, you can start your project as usual, and ParaView will trace all the actions you perform in the project.

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**Step4:**

Once you’ve completed all the tasks in your project, you should stop the trace by going to **Tools > Stop Trace.**

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**Step5:**

The generated code will pop up, ready for you to modify. For example, you can add a for-loop to save export data or make any other adjustments you need.

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**Step6:**

After editing the code according to your needs, save the .py file and copy it to the ParaView directory in your machine. Then, open ParaView, click **Run Script**, and select the .py file to execute it.

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