**Generating CFG Using ast2Json and GraphViz**

Using the **Parse** function of **ast2json** we obtained the abstract syntax tree in the form of JSON. We stored the JSON obtained into one file which is used as input to our tool. We developed our Tool in Python Language.

The first step was to get the JSON from the file using JSON.loads we store the JSON in our Global variable the loads function gives us JSON in Dictionary format. the key ‘body’ of the obtained dictionary gives us the complete AST Tree in the form of an Array of Nodes. We parsed the tree to obtain Basic blocks from it. Once a basic block is identified we link it with its parent. For keeping track of all the parent-child links of Basic blocks we are maintaining a Dictionary where Parent is the key and all of it’s linked Basic Blocks are stored as value. Once all the Basic blocks are obtained we are using Digraph from Graphviz Library to link all the basic blocks together and finally rendering the CFG in the form of PDF using the render function

**How to run the Tool on python file**

1. **Python version 3.8 with ast2json 0.2.1 and graphviz Library**
2. **The PythonTool is in Source Directory and the test Programs are is in TestCases Directory**
3. **bash run.sh this will execute the Tool which will ask for input python program**
4. **enter any program name from the TestCases Directory for ex:- firstCfg.py**
5. **if you want to run the tool on any other program save the program in TestCases Directory and follow step (3,4)**