Assignment 2:Constructing Control Flow Graph

The Assignment was about making a coding a subpart on the in house framework "kachua" and the target was to implement and dump the control flow graph of a turtle script program.I worked on two functions one of which is genCFG() it takes in an IR generated by the framework and returns the Control Flow Graph and another function was dumpCFG() which takes input a CFG and dumps it into a dot file and also renders the visual image as a pdf file.

For the implementation of the CFG I used python dictionary data structure to represent each Basic Block node and to represent them as a whole I used List to store each Basic Block dictionary definations.Each Dictionary contain three components Blockname,Instructions and Links(to the Blocknames it points to).

For dump method I used the python graphviz Library using which I encoded the CFG to graphical form and the stores/renders it as a PDF.

Steps to run:

1. From the source Folder copy the submission.py file to kachua.
2. Then simply execute kachua as it is and as input give your .tl script name.
3. While executing it will ask as input for name of the output(The CFG pdf file you want to give) enter it and done.
4. The result will automatically open the pdf viewer and the image of cfg on your system.
5. The result file will be stored in a new folder named out which will get created it is not already there.