ACTIVITY 3.1 – PROGRAMMING A DFA

Programming a DFA – User's manual
Alejandro Pizarro Chávez | A01633784
Implementation of Computational Methods
Luis Ricardo Peña Llamas
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1.0 – How to run program?

Before running the program, it's essential to verify the route for test cases inside the code. The default route is set to:

```
"C:/Users/aleja/Documents/CUARTO SEMESTRE/métodos
computacionales/Computational-Methods/programmingDFA/testCases.txt"
```

If this isn't changed, program won't be able to read test cases, therefore, an error will occur. To simply run the code, it's necessary to click the 'play' button located in the top right corner of Visual Studio Code.

To run Python scripts without Visual Studio Code, it's necessary to open a command-line and type the word `python` or `pyton3`, followed by the path to the script, like this:

```
$ python3 hello.py
Hello World!
```

After you press 'Enter' you'll see code executing.

1.1 – Output expected

After running the program, it's expected to see a table with token and corresponding type. Just like this: (screenshot retrieved directly from code)

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```
PS C:\Users\aleja\Documents\CUARTO SEMESTRE\métodos computacionales\Computational-Methods> python -u "c
Token:  Tipo:
b        --- Variable
=        --- Asignacion
7        --- Entero
a        --- Variable
=        --- Asignacion
32.4     --- Real
*        --- Multiplicacion
(        --- Parentesis que abre
-        --- Resta
8.6      --- Real
-        --- Resta
b        --- Variable
)        --- Parentesis que cierra
/        --- Division
6.1E-8   --- Real
d        --- Variable
=        --- Asignacion
a        --- Variable
^        --- Potencia
b        --- Variable
//Esto es un comentario --- Comentario
PS C:\Users\aleja\Documents\CUARTO SEMESTRE\métodos computacionales\Computational-Methods>
```

1.2 – Language in use

The whole code was developed using Python, and the IDE in use was Visual Studio Code with the suggested extensions.
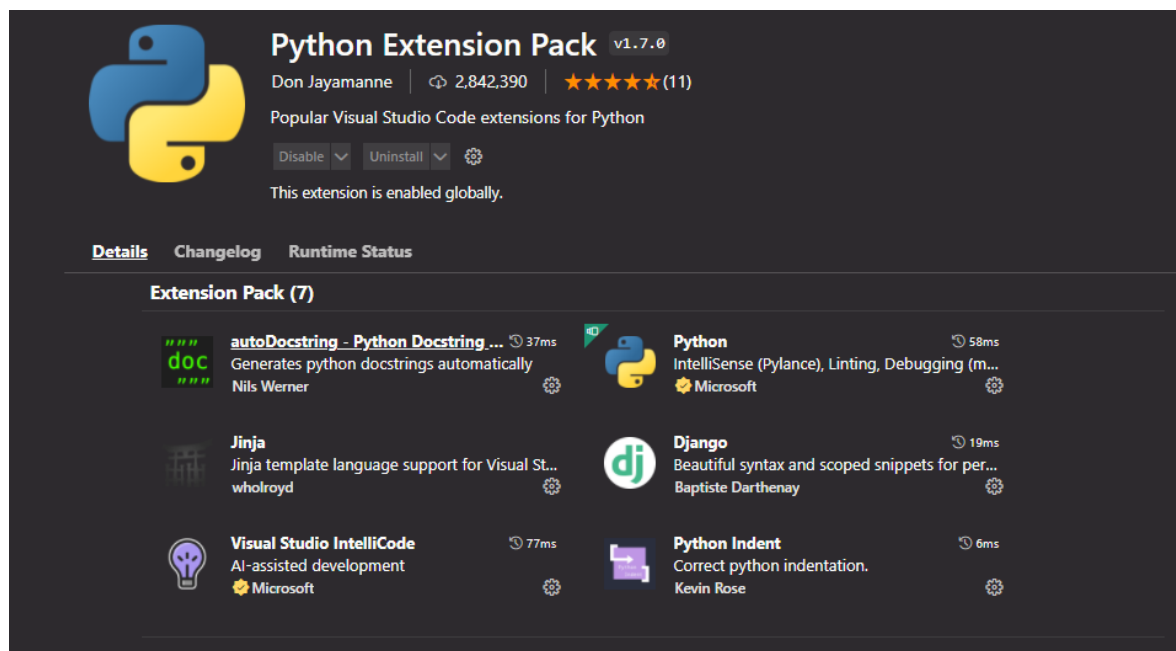
1.3 – System Requirements

The only real requirement is having either `python` or `pyton3` downloaded inside your computer.

1.4 – Automata design

The following Automata design was built using the computational tool: JFLAP