

## Practical No 7

### Implementing coding practices in python using PEP8

PEP8 is a style guide for python code. PEP stands for Python Enhancement Proposal, and they describe and document the way python language evolves. It is a document that describes new features proposed for python and document aspects of python, like design and style. It promotes a very readable and eye-pleasing coding style.

Somethings to keep in mind are:

1. Use 4-space indentation and no tabs.

Example:

```
it tools.py
1  # Aligned with opening delimiter.
2  grow = function_name(variable_one, variable_two,
3  | variable_three, variable_four)
4  # First line contains no argument. Second line onwards
5  # more indentation included to distinguish this from
6  # the rest.
7  def function_name (
8  |     variable_one , variable_two , variable_three ,
9  |     variable_four ):
10 |     print (variable_one)
11
```

2. Use docstrings: there are both single and multi-line docstrings that can be used in python. However, the single line comment fits in one line, triple quotes are used in both cases. These are used to define a particular program or define a particular function.

Example:

```
"""This is single line docstring"""
"""This is
a
multiline comment"""
```

3. Wrap lines so that they don't exceed 79 characters: The Python standard library is conservative and requires limiting lines to 79 characters. The lines can be wrapped using parenthesis, brackets, and braces. They should be used in preference to backslashes.

Example:

```
with open ( '/path/from/where/you/want/to/read/file' ) as file_one, \
    open ( '/path/where/you/want/the/file/to/be/written' , 'w' ) as file_two:
    file_two.write(file_one.read())
```

4. While naming the function or methods always use self for the first argument. If the function argument name matches with reserved words then it can be written with a trailing comma.

Example:

```
# Python program to find the
# factorial of a number provided by the user.
# change the value for a different result |
num = 7
# uncomment to take input from the user
#num = int(input("Enter a number: "))
factorial = 1
# check if the number is negative, positive or zero
if num < 0 :
    print ( "Sorry, factorial does not exist for negative numbers" )
elif num == 0 :
    print ( "The factorial of 0 is 1" )
else :
    for i in range ( 1 ,num + 1 ):
        factorial = factorial * i
    print ( "The factorial of" ,num, "is" ,factorial)
```

```
PS D:\Users\Documents\FYCS SEM 2\IT Tools> python -u "d:\Users\Documents\FYCS SEM 2\IT Tools\it tools.py"
Enter a number: 10
The factorial of 10 is 3628800
PS D:\Users\Documents\FYCS SEM 2\IT Tools> |
```