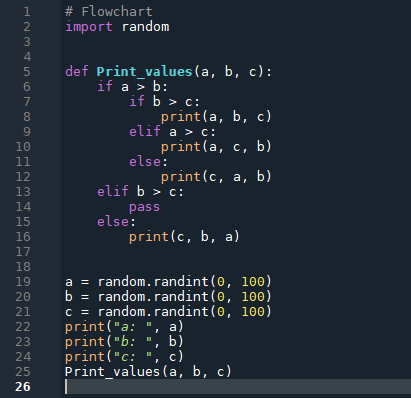
PS1 Report

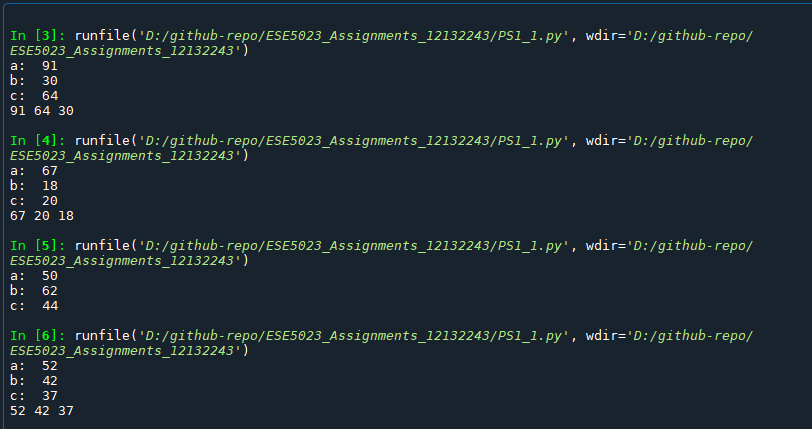
Name:左小幸 SID:12132243

**PS1\_1: Flowchart**

In this case, I created a Print\_values function with parameters a, b, and c. In the function, I use nesting of **if** statements to implement the judgment shown in the flowchart.

Here is the code and some results:





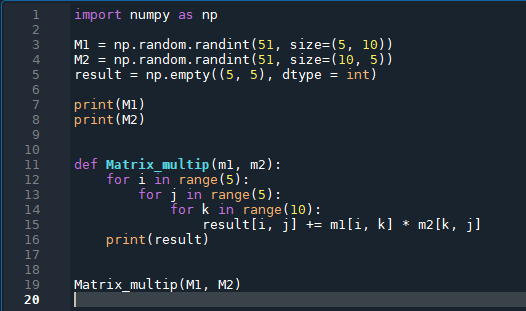
“<https://www.cnblogs.com/oNull/p/13472480.html#random_1>”help me know how to create random numbers in python. In in problem set 1.

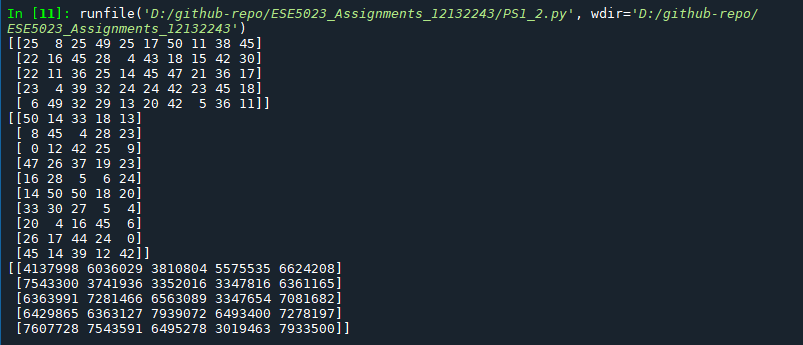
**PS2:** **Matrix multiplication**

2.1: The M1 and M2 matrices are created using **np.random.randint()** function, both are filled with random integers from 0 and 50. The first parameter in the function specifies the range of values in the matrix, and the second parameter specifies the size of the matrix.

2.2: I've created a Matrix\_multip() function that uses a for loop to multiply matrices. Where **i** represents the 5 rows of matrix M1, **j** represents the 5 columns of matrix M2, and **k** represents the 10 elements in each row of M1 multiplied by the 10 corresponding elements in each column of M2.

Here is the code and a result:





“<https://www.runoob.com/numpy/numpy-array-creation.html>”and“<https://www.cnblogs.com/pipiyan/p/10445948.html>” helped me understand how to create matrices using the Numpy library, in problem set2.

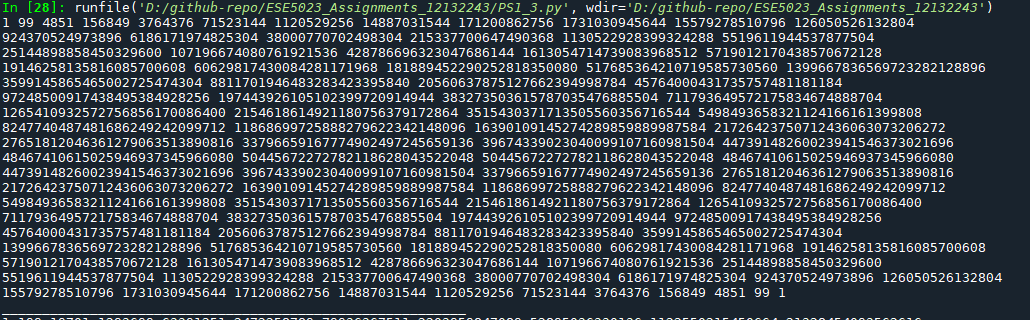
**PS3: Pascal triangle**

In this case, I've created a function Pascal\_triangle(k) that takes an argument k. In the function, a square matrix of size k will be created first, and then the values of PASCAL triangles will be generated line by line and stored in the square matrix according to the rule, as shown in the following figure.

Here is the code and a result:



Pascal\_triangle(100)



Pascal\_triangle(200)



“<https://blog.csdn.net/weixin_34273481/article/details/92068609>” tells me how do I create a 0 matrix, in problem set3.

PS4:

PS5：

找到eval函数计算字符串表达式

https://www.runoob.com/python/python-func-eval.html