5.1.2 Compute the PageRank of each page in Fig. 5.7, assuming .

Page A links to each other two pages and itself.

Page B links to each other two pages

Page C links to Page B and it self.

Thus we can get the transition matrix:

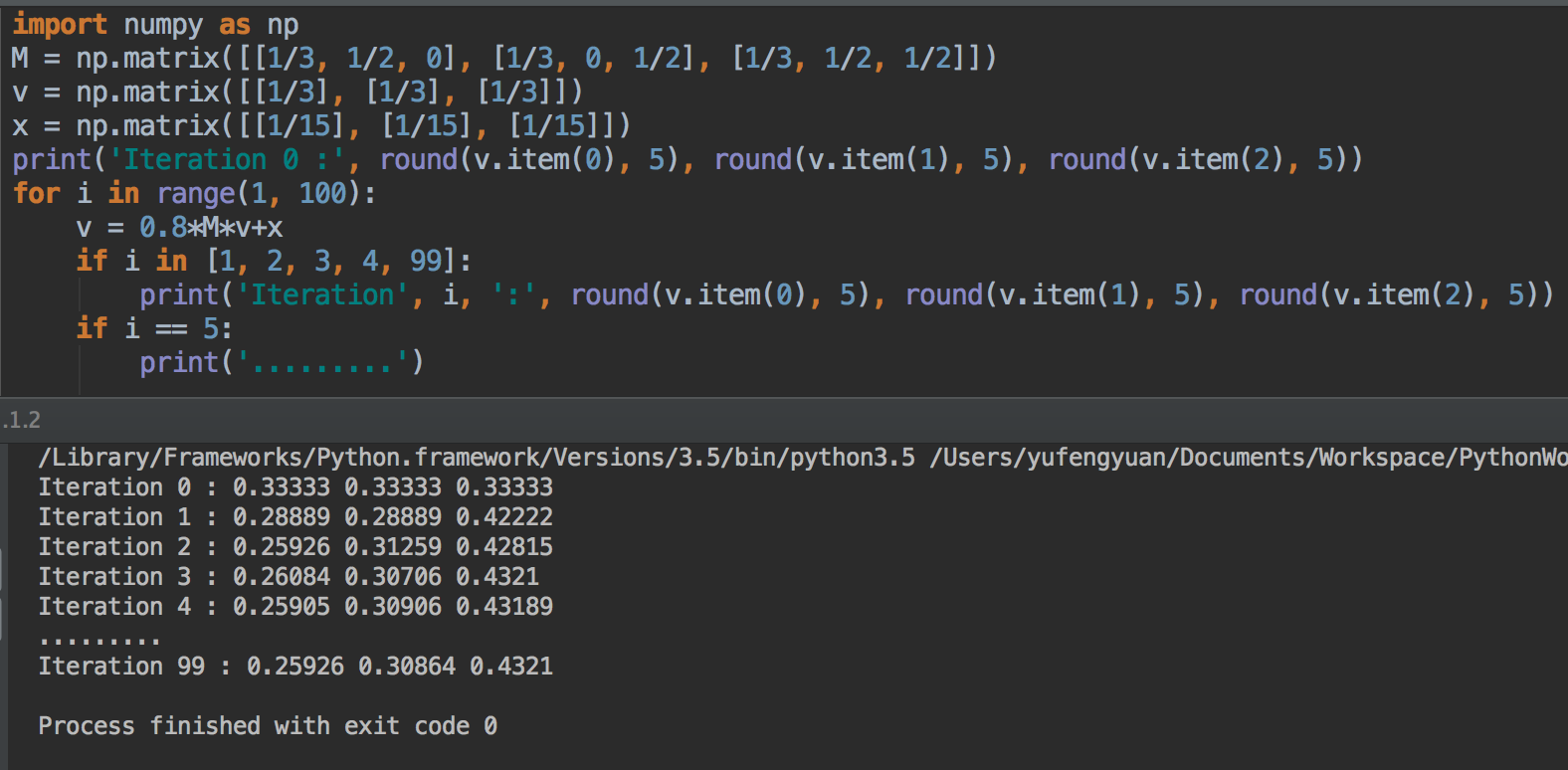
At the beginning, each of page should be have equal probability and 1/n, Thus the initial PageRank v should be:

According to the equation of PageRank, PageRank from the current PageRank estimate will be:

where e is the vector of all 1’s with the appropriate number of components, n is the number of nodes in the page.

And if , then we can calculate:

We can keep doing like this, then we got:



5.3.1 Compute the topic-sensitive PageRank for the graph of Fig. 5.15. Assuming the teleport set is:

1. A only
2. A and C

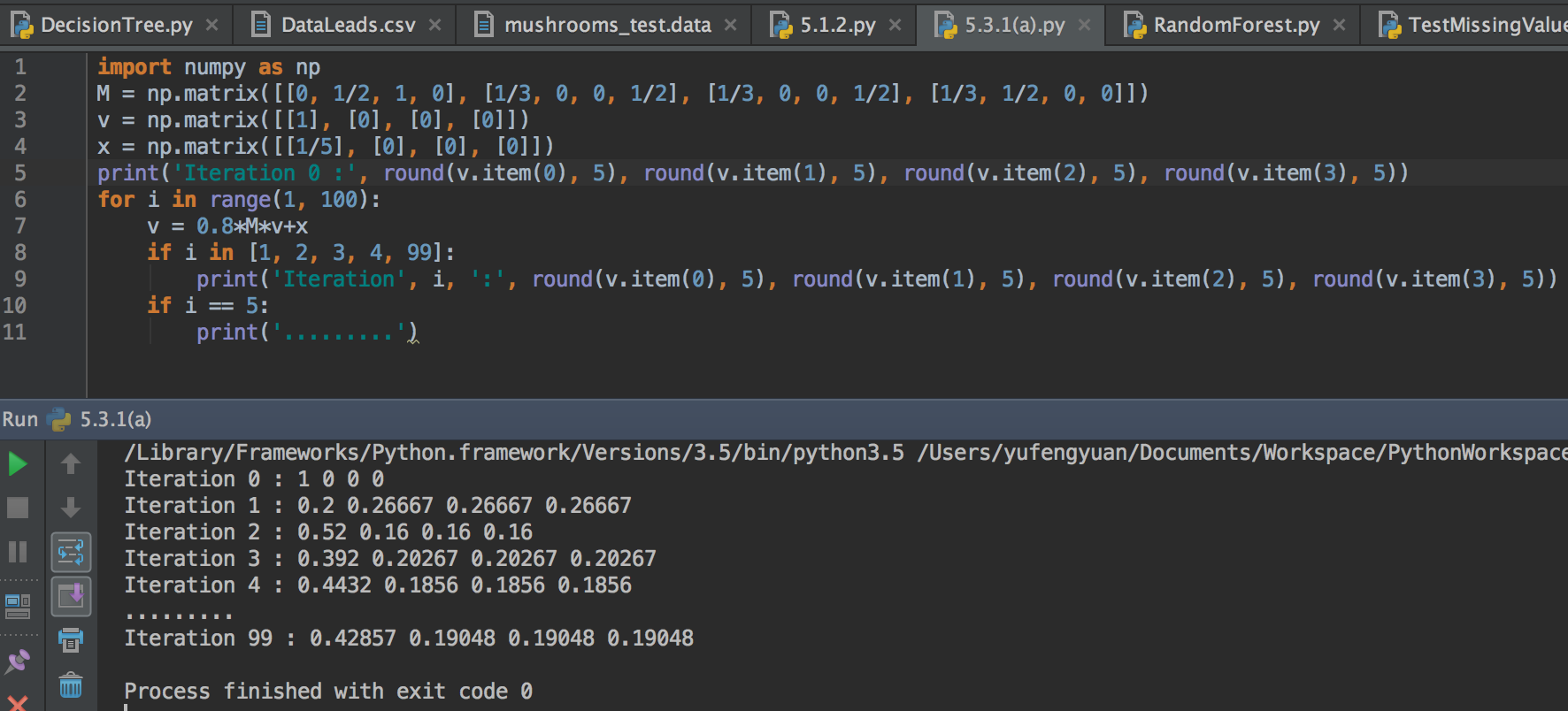
As same with the first question, we can get the transition matrix as follow:

And we will still use the equation:

And we assuming the is same as the first question, where let

1. For A only, then the initial PageRank should be:

In this case:



1. For A and C, then the initial PageRank should be:

In this case:

