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NPTEL (https://swayam.gov.in/explorer?ncCode=NPTEL) » The Joy of Computing using Python (course)

Week 12: Assignment 12

The due date for submitting this assignment has passed.

Due on 2021-10-20, 23:59 IST.

Assignment submitted on 2021-10-18, 21:08 IST

1) In the point distribution method of page rank algorithm, at each iteration, each node shares its pagerank value by ***1 point***

- Randomly choosing one of its outgoing links and sharing all its pagerank value to the node connected to that link.
- Dividing its pagerank value equally to all the outgoing links.
- Dividing its pagerank value randomly to all the outgoing links.
- Dividing its pagerank value to all the outgoing links with the value given being proportional to their outdegree.

Yes, the answer is correct.
Score: 1
Accepted Answers:
Dividing its pagerank value equally to all the outgoing links.

2) In the random walk method, what is the next step when a sink node is encountered in the underlying graph? ***1 point***

- random node is chosen out of all the given nodes.
- The node with the maximum number of incoming links is chosen.
- The node with the maximum number of outgoing links is chosen.
- The process stops at this stage.

Yes, the answer is correct.
Score: 1

Accepted Answers:
random node is chosen out of all the given nodes.

3) According to the Google Page rank algorithm, the rank of a page depends on: A. Number of pages it is referring to. ***1 point***

- Number of pages it is referring to.
- Number of pages referring to it.
- Rank of pages it is referring to.
- Rank of pages referring to it.

No, the answer is incorrect.
Score: 0
Accepted Answers:
Rank of pages referring to it.

4) Comment on the purpose of the following command. ***1 point***
sorted(p.items(),key=operator.itemgetter(1))

- Sort the items of dictionary, p by key
- Sort the items of dictionary, p by values
- Sort the elements of list, p by values
- Sort the items of Tuple, p by values

Yes, the answer is correct.
Score: 1
Accepted Answers:
Sort the items of dictionary, p by values

5) Which of the following is not true about Collatz Conjecture? ***1 point***

- If the previous term is even, the next term is one half the previous term.
- If the previous term is odd, the next term is 3 times the previous term.
- If the previous term is odd, the next term is 3 times the previous term plus 1.
- No matter what value of n, the sequence will always reach 1.

Yes, the answer is correct.
Score: 1
Accepted Answers:
If the previous term is odd, the next term is 3 times the previous term.

6) The sequence based on 3n+1 problem will always reach ***1 point***

- True
- False

Yes, the answer is correct.
Score: 1
Accepted Answers:
True

7) What is the sequence obtained according to the 3m+1 algorithm for m=9? ***1 point***

- 28,14,7,22,11,34,17,52,26,13,40,20,10,5,16,8,4,2,1
- 28,14,7,22,11,34,52,26,13,40,20,10,5,16,8,4,2,1

- 28,14,7,22,11,17,52,26,13,40,20,10,5,16,8,4,2,1
- 28,14,7,22,11,34,17,52,26,13,40,20,10,5,16,8,4,2,1

Yes, the answer is correct.
Score: 1

Accepted Answers:
28,14,7,22,11,34,17,52,26,13,40,20,10,5,16,8,4,2,1

8) Consider the following statements: ***1 point***

a) Random Walk method requires a lesser number of iterations to calculate accurate PageRank as compared to Points Distribution method.

b) Points Distribution method requires lesser number of iterations to calculate accurate PageRank as compare to Random Walk method

- Statement a is correct
- Statement b is correct
- Statement b is correct

Yes, the answer is correct.
Score: 1

Accepted Answers:
Statement b is correct

9) In the web graph, nodes are the web pages. What are the edges? ***1 point***

- Network Connections
- Links to other web pages
- URLs
- None of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
Links to other web pages

10) How many iterations does the number, 75 take to converge in Collatz Conjecture? ***1 point***

- 14
- 15
- 13
- 12

Yes, the answer is correct.
Score: 1

Accepted Answers:
14

using Python (unit?unit=245&lesson=265)

- **Quiz: Week 12: Assignment 12 (assessment?name=338)**
- Week 12: Programming Assignment 1 - Candies (/noc21_cs75/progassignment?name=339)
- Week12: Programming Assignment 2 - Suitcases (/noc21_cs75/progassignment?name=340)
- Week12: Programming Assignment 3 - Game of Strengths (/noc21_cs75/progassignment?name=341)

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October 10 Programming test - Session 2 (8PM to 9PM)