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Courses » Big Data Computing

Announcements

Course

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Unit 9 - Week-8

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Course outline

How to access
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Week-1

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Week-8

- ☐ Parameter Servers
- ☐ PageRank Algorithm in Big Data
- ☐ Spark GraphX & Graph Analytics (Part-I)
- ☐ Spark GraphX & Graph Analytics (Part-II)
- ☐ Case Study:

Assignment-8

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

Due on 2019-04-24, 23:59 IST.

1) Match the following:

1 point

- | | |
|--------------------------|-----------------------|
| A. Dataflow Systems | i. Vertex Programs |
| B. Graph Systems | ii. Parameter Servers |
| C. Shared Memory Systems | iii. Guinea Pig |

- ☐ A:ii, B: i, C: iii
- ☐ A:iii, B: i, C: ii
- ☐ A:ii, B: iii, C: i
- ☐ A:iii, B: ii, C: i

No, the answer is incorrect.

Score: 0

Accepted Answers:

A:iii, B: i, C: ii

2) Which of the following statement(s) is/are true in context of Parameter Servers.

1 point

- S1: A machine learning framework
 S2: Distributes a model over multiple machines
 S3: It offers two operations: (i) Pull for query parts of the model (ii) Push for update parts of the model.

- ☐ Only S1 is true
- ☐ Only S2 is true
- ☐ Only S3 is true
- ☐ All of the mentioned

No, the answer is incorrect.

Score: 0

Accepted Answers:

All of the mentioned

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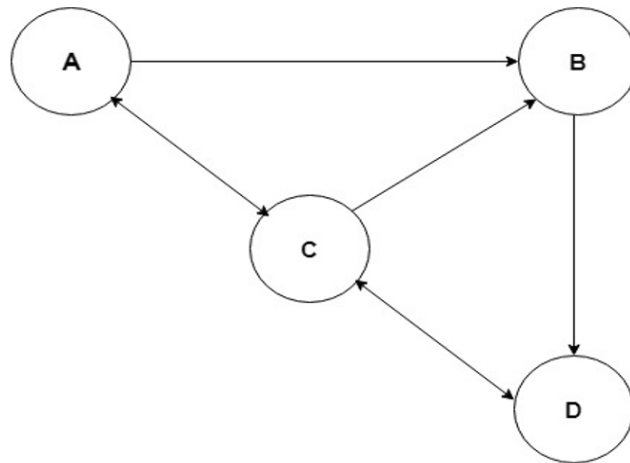


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material

- ☐ Big Data Computing: Feedback for Week-08
- ☐ Assignment-8 Solution

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Hint:- The basic PageRank formula is:

$$PR_{t+1}(u) = \sum PR_t(v) / C(v)$$

Where, $PR_{t+1}(u)$: page rank of node u under consideration

$PR_t(v)$: previous page rank of node ' v ' pointing to node ' u '

$C(v)$: outgoing degree of vertex ' v '

- ☐ 1/6
- ☐ 1.5/12
- ☐ 2.5/12
- ☐ 1/3

No, the answer is incorrect.

Score: 0

Accepted Answers:

1/6

4) Which of the following statements are true in the context of Apache Spark GraphX operators ?

1 point

S1: Property operators modify the vertex or edge properties using a user defined map function and produces a new graph.

S2: Structural operators operate on the structure of an input graph and produces a new graph.

S3: Join operators add data to graphs and produces a new graphs.

- ☐ Only S1 is true
- ☐ Only S2 is true
- ☐ Only S3 is true
- ☐ All of the mentioned

No, the answer is incorrect.

Score: 0

Accepted Answers:

All of the mentioned

5) True or False ?

1 point

The `outerJoinVertices()` operator joins the input RDD data with vertices and returns a new graph. The vertex properties are obtained by applying the user defined `map()` function to the all vertices, and

includes ones that are not present in the input RDD.

- ☐ True
☐ False

No, the answer is incorrect.

Score: 0

Accepted Answers:

True



6) Which of the following statement(s) is/are true ?

1 point



S1: Apache Spark GraphX provides the following property operators - mapVertices(), mapEdges(), mapTriplets()



S2: The RDDs in Spark, depend on one or more other RDDs. The representation of dependencies in between RDDs is known as the lineage graph. Lineage graph information is used to compute each RDD on demand, so that whenever a part of persistent RDD is lost, the data that is lost can be recovered using the lineage graph information.



- ☐ Only S1 is true
☐ Only S2 is true
☐ Both S1 and S2 are true
☐ None of the mentioned

No, the answer is incorrect.

Score: 0

Accepted Answers:

Both S1 and S2 are true

7) GraphX provides an API for expressing graph computation that can model the _____ **1 point**

- ☐ GaAdt
☐ Spark Core
☐ Pregel
☐ None of the mentioned

No, the answer is incorrect.

Score: 0

Accepted Answers:

Pregel

8) Which of the following are provided by spark API for graph parallel computations:

1 point

- i. joinVertices
ii. subgraph
iii. aggregateMessages

- ☐ Only (i)
☐ Only (i) and (ii)
☐ Only (ii) and (iii)
☐ All of the mentioned

No, the answer is incorrect.

Score: 0

Accepted Answers:

All of the mentioned

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