# Lesson #1.2: Spark UI Lab

#### **Duration:** 15 minutes

#### **Objective:** Identify key pieces of information related to a spark application such as cluster configuration and metrics for jobs, stages, executors, caches, and SQL queries.

#### **Notes**

#### This lab is supported by the **Spark UI Simulator** and the scenario **Exploring the Spark UI**.

#### It is **NOT** recommended to complete this lab with the live version of the notebook due to variance that can appear in each execution of the notebook which the assessment cannot account for.

#### To facilitate various modalities and time constraints, multiple variants of this lab are described below.

#### The purpose of this lab is to force students to use the Spark UI to find information essential to diagnosing spark applications. The more time students can spend on this exercise, the more developed their skills will become.

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## Variant #1: Top To Bottom

Each student will open the simulator, and then click the Lab icon to open the lab into a new tab. Students should then be instructed to complete as many questions as they can in the time allowed.

After the students have completed the exercise, the instructor should review each question with the students and if students were unable to answer a specific question, the instructor should demonstrate how they were able to find the correct answer.

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## Variant #2: Top To Bottom, Paired

Instructions are the same as for Variant #1 above except that one student will open the Spark UI and navigate while the second student logs the results. This should facilitate discussion while potentially quickening the pace via cooperative learning.

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## Variant #3: Delegated Sections

There are 10 sections. Sections #1, #7 & #8 are relatively small - combine them together and treat them as one section making 8 sections total.

Assign each student to a section (1-8). For example, have each student count off 1,2,3,4,5,6,7,8. Or in a larger setting, each table is assigned the same section as in Table #1, #2, #3, etc.

Each student will open the simulator, and then click the Lab icon to open the lab into a new tab. Students should then be instructed to complete as many questions as they can for their assigned section in the time allowed. If they finish early, encourage them to start in on another section.

The review should consist of the instructor asking each group what answer they got for their respective section. The instructor must demonstrate each one because every student will not have seen every question. Encourage them to complete the lab on their own.

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## Variant #4: Fly-By

The instructor encourages each student to follow the instructor’s presentation. Students can follow along in their own instance of the simulator if they want to. The instructor pulls up the specific screen and then calls out the question. Students provide the answer to the instructor by calling it out, over slack, etc. Students can record/test the answers in their copy of the lab, but the instructor is not expected to do so.

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