Assisted Practice 12.1: Element Search in Sorted List

Problem Scenario: Write a program to illustrate the different ways to handle a list.

Objective: In this demonstration, we will learn how to handle a list.

Input List:
["Ryan","Adam","Anna","Robert","Zane","Mike","Ross","Samantha","Jessica","Harvey", "Luious","Rachel"]

Expected Output:

The sorted list of employees is given below:

['Adam', 'Anna', 'Harvey', 'Jessica', 'Luious', 'Mike', 'Rachel', 'Robert', 'Ross', 'Ryan', 'Samantha', 'Zane']

Enter the employee's name you wish to search: Adam

Adam is present in the given list.

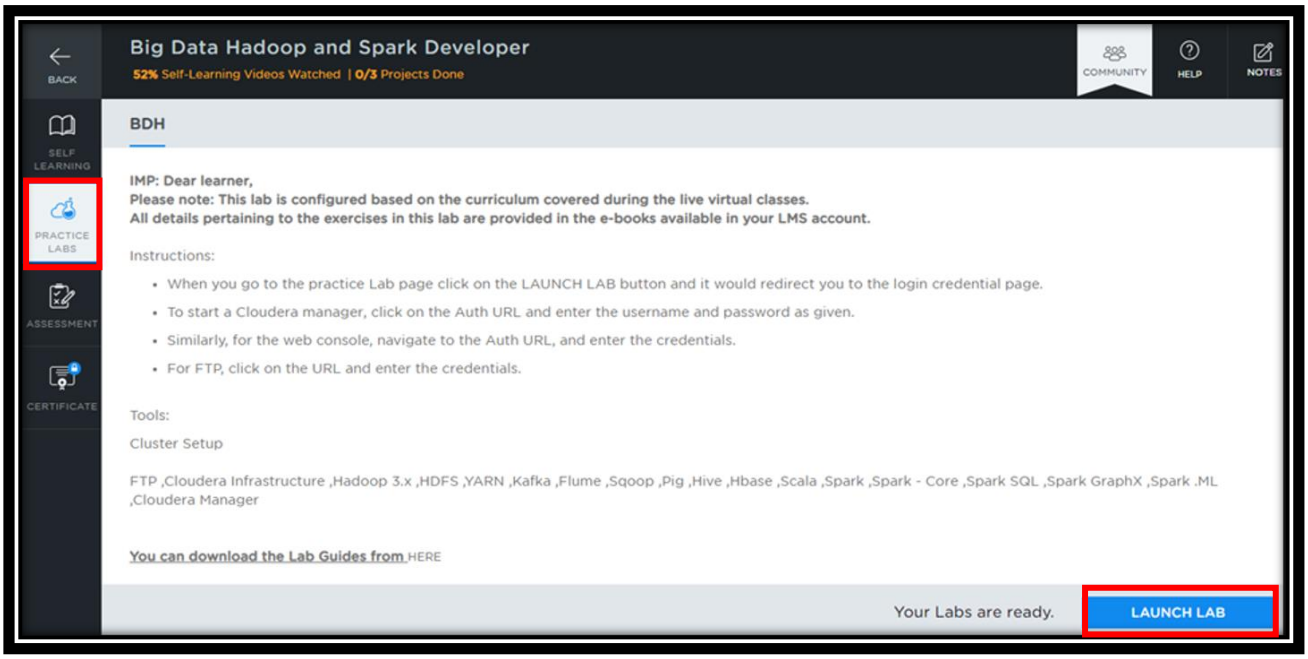
Steps to Perform:

Step 1: Log in to your LMS account

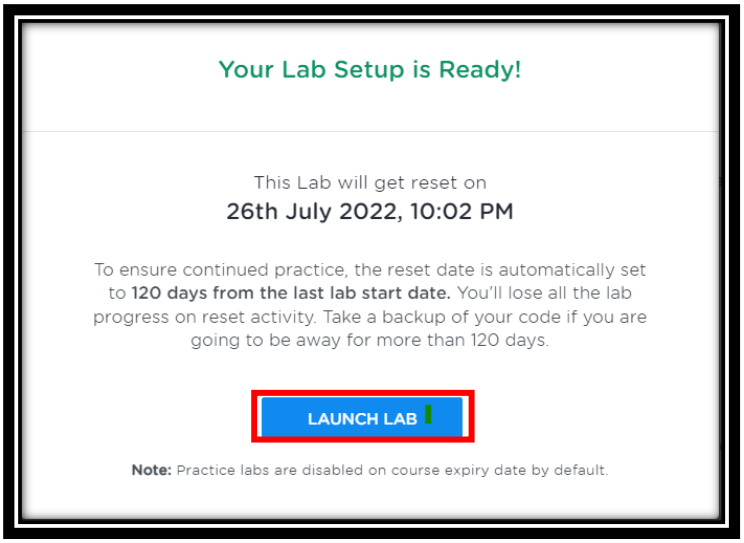
Step 2: Open the course "**Big data Hadoop and Spark developer**"

(Note: The course name reflects depending on the program purchased.)

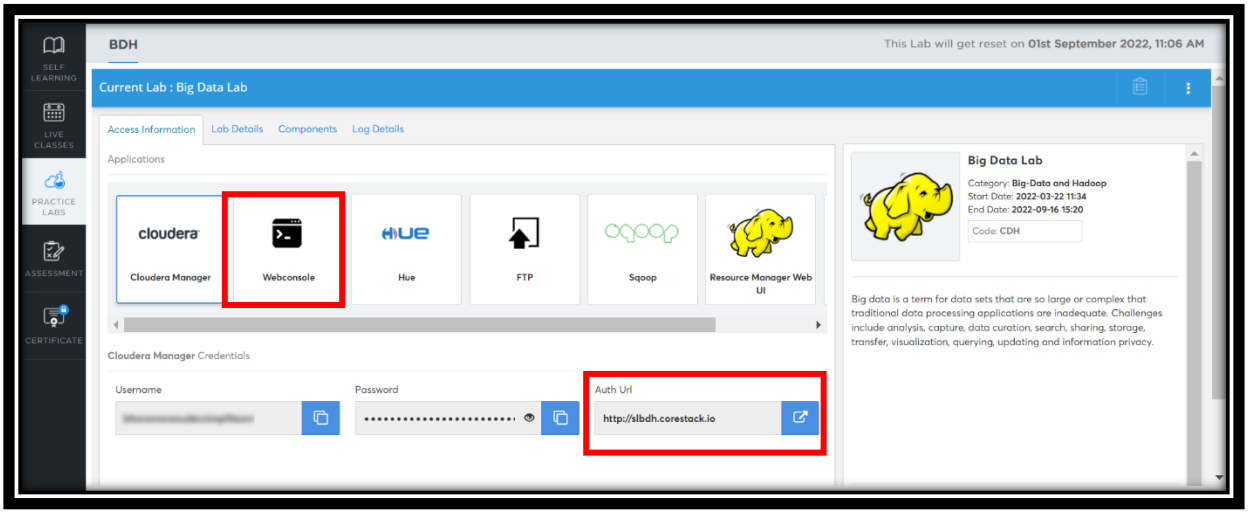
Step 3: On the left side, click on the "**PRACTICE LABS**" tab and click on the "**LAUNCH LAB**" button



Step 4: Again, click on the "**LAUNCH LAB**" button



STEP 5: Click on "**Webconsole**" and click on the "**Auth Url**"



Step 6: Copy the "**Username**" and the "**Password**" provided to log in to the Web console

Step 7: Paste the "**Username**" and the "**Password**" on the console and click on Enter

Note: The password will not be visible when pasted on the console.

Step 8: Create a python file

Command:

vi search.py

The below screen appears:

Step 9: Perform the tasks

9.1 Save the given input list in a variable and perform the sorting operation

Command:

my_list = ["Ryan","Adam","Anna","Robert","Zane","Mike","Ross","Samantha","Jessica","Harvey","Luious","Rachel"]

my_list = sorted(my_list)

```
my_list = ["Ryan","Adam","Anna","Robert","Zane","Mike","Ross","Samantha","Jessica","Harvey","Luious","Rachel"]
my_list = sorted(my_list)
```

9.2 Display the sorted list

Command:

print("The sorted list of employees is given below:")

print(my_list)

```
my_list = ["Ryan","Adam","Anna","Robert","Zane","Mike","Ross","Samantha","Jessica","Harvey","Luious","Rachel"]
my_list = sorted(my_list)
print("The sorted list of employees is given below:")
print(my_list)
```

Command:

python3 search.py

```
[testdemomay1301mailinator@bdh-cluster2-edgenode10 ~]$ python3 search.py
The sorted list of employees is given below:
['Adam', 'Anna', 'Harvey', 'Jessica', 'Luious', 'Mike', 'Rachel', 'Robert', 'Ross', 'Ryan', 'Samantha', 'Zane']
[testdemomay1301mailinator@bdh-cluster2-edgenode10 ~]$
```

9.3 Take the input from the user to search an element

Command:

search_elem = input(str("Enter the employee name you wish to search:"))

9.4 Create a function that performs the searching operation on the list and returns a true or false value

9.5 Display “Element Found” if the result is true and “Element not Found” if the result is false

Command:

```
def search (my_list, search_elem):
    for i in range(len(my_list)):
        if my_list[i] == search_elem:
            return True
    return False
if(search(my_list, search_elem)):
    print (search_elem+ "Employee is present in the given list")
else:
    print (search_elem+ "Employee is not present in the given list")
```

```
my_list = ["Ryan","Adam","Anna","Robert","Zane","Mike","Ross","Samantha","Jessica","Harvey","Luious","Rachel"]
my_list = sorted(my_list)
print("The sorted list of employees is given below:")
print(my_list)

search_elem = input(str("Enter the employee name you wish to search:"))

def search (my_list, search_elem):
        for i in range(len(my_list)):
                if my_list[i] == search_elem:
                        return True
        return False
if(search(my_list, search_elem)):
        print (search_elem+ "Employee is present in the given list")
else:
        print (search_elem+ "Employee is not present in the given list")
```

9.6 Run the Python script to check the output

```
[testdemomay1301mailinator@bdh-cluster2-edgenode10 ~]$ python3 search.py
The sorted list of employees is given below:
['Adam', 'Anna', 'Harvey', 'Jessica', 'Luious', 'Mike', 'Rachel', 'Robert', 'Ross', 'Ryan', 'Samantha', 'Zane']
Enter the employee name you wish to search:Adam
AdamEmployee is present in the given list
```