DAILY ONLINE ACTIVITIES SUMMARY

Date:	**21-06-2020**	**Name:**	**Shriraksha**
Sem & Sec	**8th,B**	**USN:**	**4AL16CS099**

Online Test Summary

Subject	**--**		
Max. Marks	**--**	**Score**	**--**

Certification Course Summary

Course	**Hadoop and Bigdata**		
Certificate Provider	**Eduonix**	**Duration**	**3.5 Hrs**

Coding Challenges

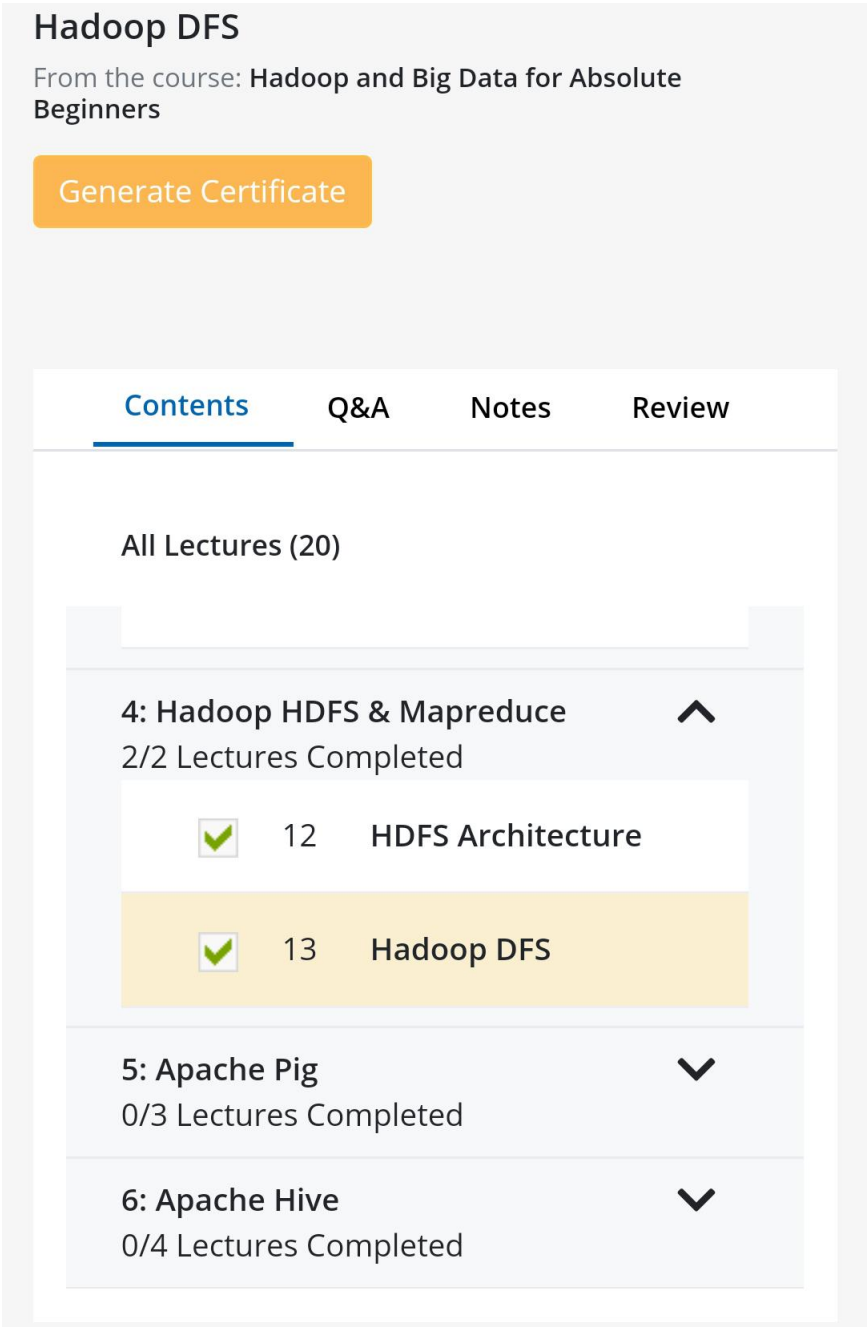
Problem Statement:

1.Program to reverse an array

Status: Solved

Uploaded the report in Github	**Yes**
If yes Repository name	**alvas-education-foundation/ Shriraksha_k**
Uploaded the report in slack	**Yes**

Certification Course Details:



Coding Challenges:

Write a Java program to create a doubly linked list of n nodes and display it in reverse order

```
public class ReverseList {

    //Represent a node of the doubly linked list
```

```
class Node{
    int data;
    Node previous;
    Node next;

    public Node(int data) {
        this.data = data;
    }
}

//Represent the head and tail of the doubly linked list
Node head, tail = null;

//addNode() will add a node to the list
public void addNode(int data) {
    //Create a new node
    Node newNode = new Node(data);

    //If list is empty
    if(head == null) {
        //Both head and tail will point to newNode
        head = tail = newNode;
        //head's previous will point to null
        head.previous = null;
        //tail's next will point to null, as it is the last node of the list
        tail.next = null;
    }
    else {
        //newNode will be added after tail such that tail's next will point to newNode
        tail.next = newNode;
        //newNode's previous will point to tail
        newNode.previous = tail;
        //newNode will become new tail
        tail = newNode;
```

```
        //As it is last node, tail's next will point to null
        tail.next = null;
    }
}

//reverse() will reverse the doubly linked list
public void reverse() {
    //Node current will point to head
    Node current = head, temp = null;

    //Swap the previous and next pointers of each node to reverse the direction of the list
    while(current != null) {
        temp = current.next;
        current.next = current.previous;
        current.previous = temp;
        current = current.previous;
    }
    //Swap the head and tail pointers.
    temp = head;
    head = tail;
    tail = temp;
}

//display() will print out the elements of the list
public void display() {
    //Node current will point to head
    Node current = head;
    if(head == null) {
        System.out.println("List is empty");
        return;
    }

    while(current != null) {
        //Prints each node by incrementing the pointer.
```

```
        System.out.print(current.data + " ");
        current = current.next;
    }
}

public static void main(String[] args) {

    ReverseList dList = new ReverseList();
    //Add nodes to the list
    dList.addNode(1);
    dList.addNode(2);
    dList.addNode(3);
    dList.addNode(4);
    dList.addNode(5);

    System.out.println("Original List: ");
    dList.display();

    //Reverse the given list
    dList.reverse();

    //Displays the reversed list
    System.out.println("\nReversed List: ");
    dList.display();
}
```