DAILY ONLINE ACTIVITIES SUMMARY

Date:	**19-05-2020**	**Name:**	**Shriraksha**
Sem & Sec	**8th,B**	**USN:**	**4AL16CS099**

Online Test Summary

Subject	**Big data analytics**		
Max. Marks	**30**	**Score**	**20**

Certification Course Summary

Course	**Introduction to ethical hacking**		
Certificate Provider	**Great learning**	**Duration**	**6 Hrs**

Coding Challenges

Problem Statement: prob1- ***To add some letters for a given word or letter then to find the shortest palindrome possible***

Prob2- ***To check whether the given linked list is palindrome or not***

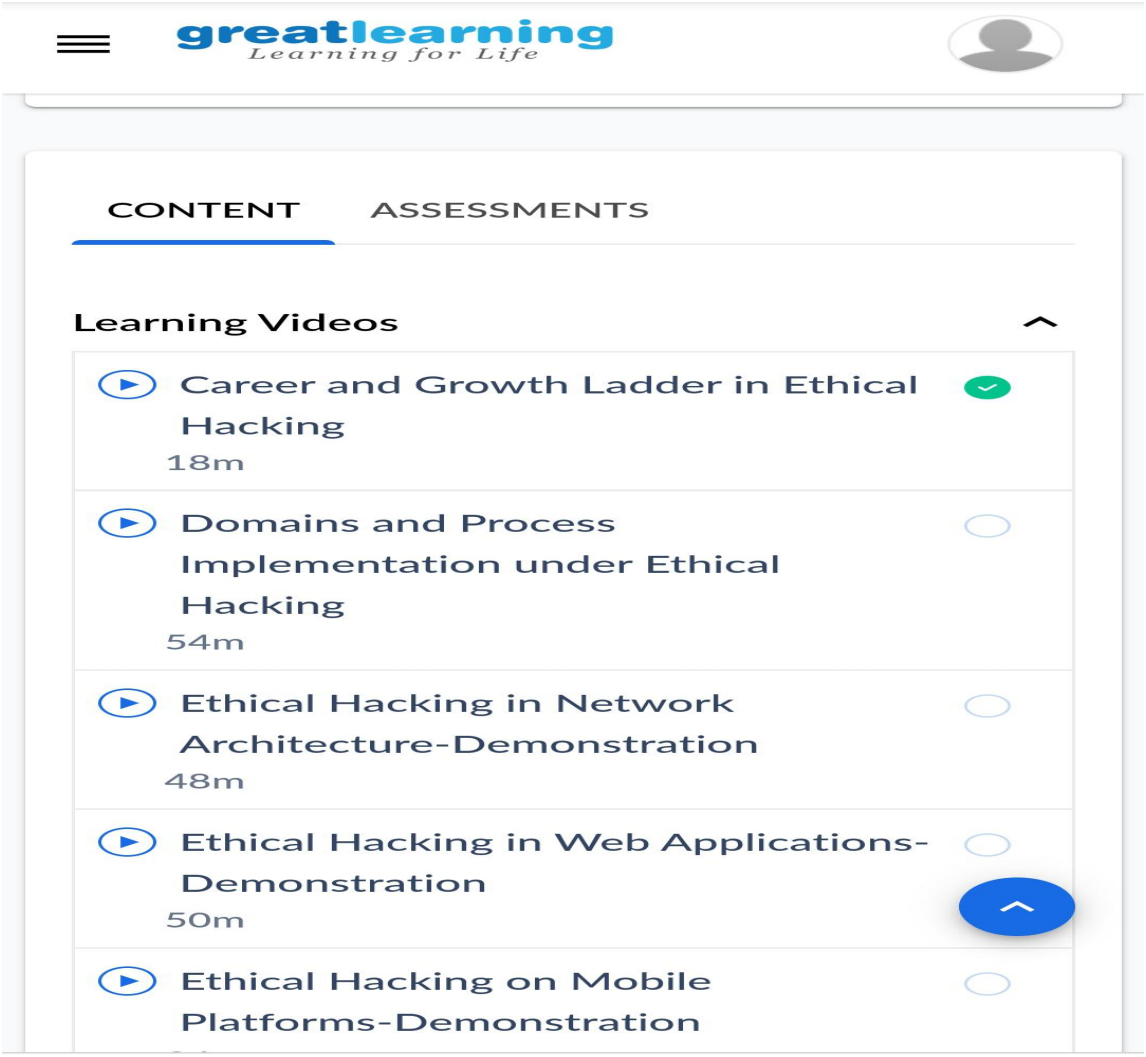
Status: Solved

Uploaded the report in Github	**Yes**
If yes Repository name	**Shriraksha**
Uploaded the report in slack	**Yes**

Online Test Details:

1) Certification Course Details:

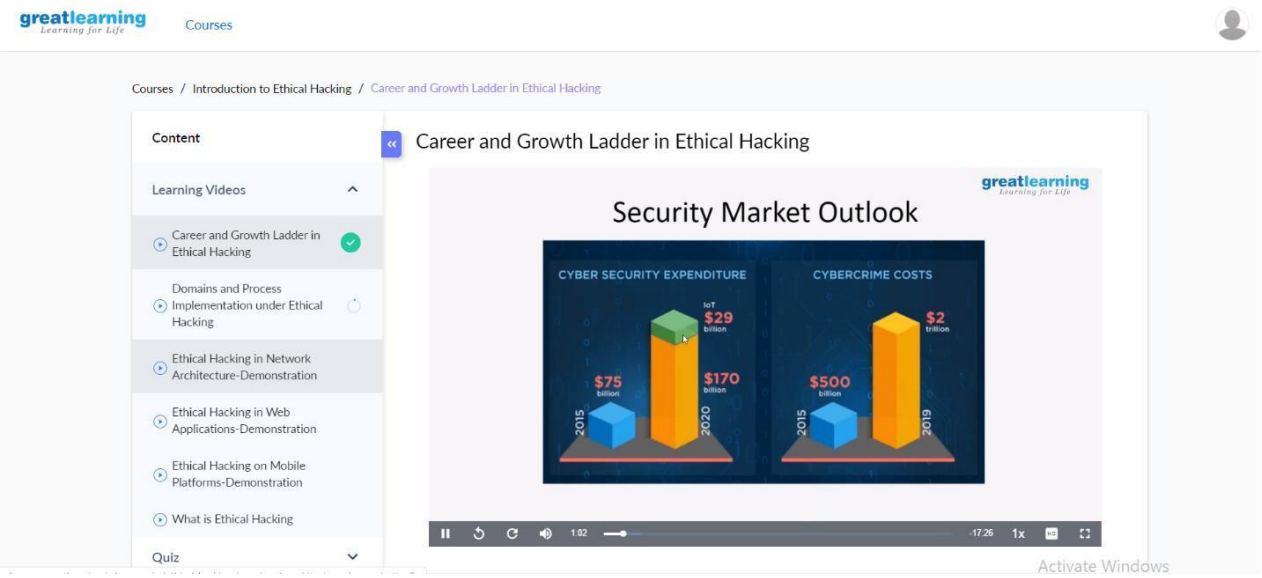
Certified ethical hackers make an average annual income of **$80,074**, according to Payscale. The average starting salary for a certified ethical hacker is **$95,000**, according to EC-Council senior director Steven Graham. The founder of NoWiresSecurity, Eric Geier, estimates a more conservative **$50,000 to $100,000 per year** in the first years of work depending on your employer, experience and education. Those with a few years of experience can pull **$120,000 and upwards per year**, particularly those who work as independent consultants.



Ethical Hacking Career: Job Profiles

After attaining the much coveted CEH v10,an ethical hacker can try for the following roles:

- Information Security Analyst
- Security Analyst
- Certified Ethical Hacker (CEH)
- Ethical Hacker
- Security Consultant, (Computing / Networking / Information Technology)
- Information Security Manager
- Penetration Tester



An ethical hacker finds a job in any company which has an internet facing side or anything to do with the web. These include college institutions like MIT and even private companies ranging from logistic services to data warehousing companies. Apart from these, you also get a chance to work for the military and top-secret intelligence gathering agencies like the CIA, Mossad, NSA.

Ethical Hacker Skill Set

A person with an ethical hacking career is expected to be proficient in database handling, networking, and operating systems and also have excellent soft skills as they need to communicate problems regarding security to the rest of the organization. Other than these generalized skillsets, an ethical hacker also have a good grasp on the following skills:

- Network traffic sniffing
- Orchestrate various network attacks
- Exploit buffer overflow vulnerabilities
- SQL injection
- Password guessing and cracking
- Session hijacking and spoofing
- DNS spoofing

2) Coding Challenges:

1. We have a Letter or a word then we need add some letters to it and need to find out shortest palindrome
   example we take "S": S will be the shortest palindrome string.
   If we take "xyz": zyxyz will be the shortest palindrome string
   So we need to add some characters to the given string or character and find out what will be the shortest palindrome string by using simple java program.
2. Write a simple code to identify given linked list is palindrome or not by using stack. First take a Stack. Traverse through each node of the linked list and push each node value to Stack.
   Once the traversal & copying is done, iterate through linked list from head node again. In each iteration, pop one stack element and compare with node value in respective iteration. It is expected to match stack popped value with node value. In case of all matches, its a palindrome. Any one element mismatch makes it not a palindrome.

Prog1:

```
package shortestpalindromeexample.java;
import java.util.Scanner;

public class ShortestPalindromeDemo {

public static String shortestPalindrome(String str)

{ int x=0;
int y=str.length()-1;

while(y>=0){ if(str.charAt(x)==str.c
harAt(y)){ x++;
}
y--;
}

if(x==str.length())
return str;

String suffix = str.substring(x);
String prefix = new StringBuilder(suffix).reverse().toString();
String mid = shortestPalindrome(str.substring(0, x));
```

```
return prefix+mid+suffix;
}

public static void main(String[] args)

{ Scanner in = new

Scanner(System.in);

System.out.println("Enter a String to find out shortest palindrome");

String str=in.nextLine();

System.out.println("Shortest palindrome of "+str+" is "+shortestPalindrome(str));

}
```

Prog 2:

```
import java.util.Stack;

class Node {
int data;
Node next;

Node(int i)
{
this.data = i;
this.next = null;
}
};

class Main
{
public static boolean isPalindrome(Node head)
{
Stack s = new Stack<>();

Node node = head; // push
while (node != null)
{ s.push(node.data);
node = node.next;
}
```

```
// traverse
node = head;
while (node != null)
{
int top = s.pop(); //pop

if (top != node.data)
{ return false;
}

node = node.next;
}

return true;
}

public static void main(String[] args)
{
Node head = new Node(1);
head.next = new Node(2);
head.next.next = new Node(3);
head.next.next.next = new Node(2);
head.next.next.next.next = new Node(1);

if (isPalindrome(head))
{ System.out.print("Linked List is a
palindrome.");
} else {
System.out.print("Linked List is not a palindrome.");
}
}
}
```