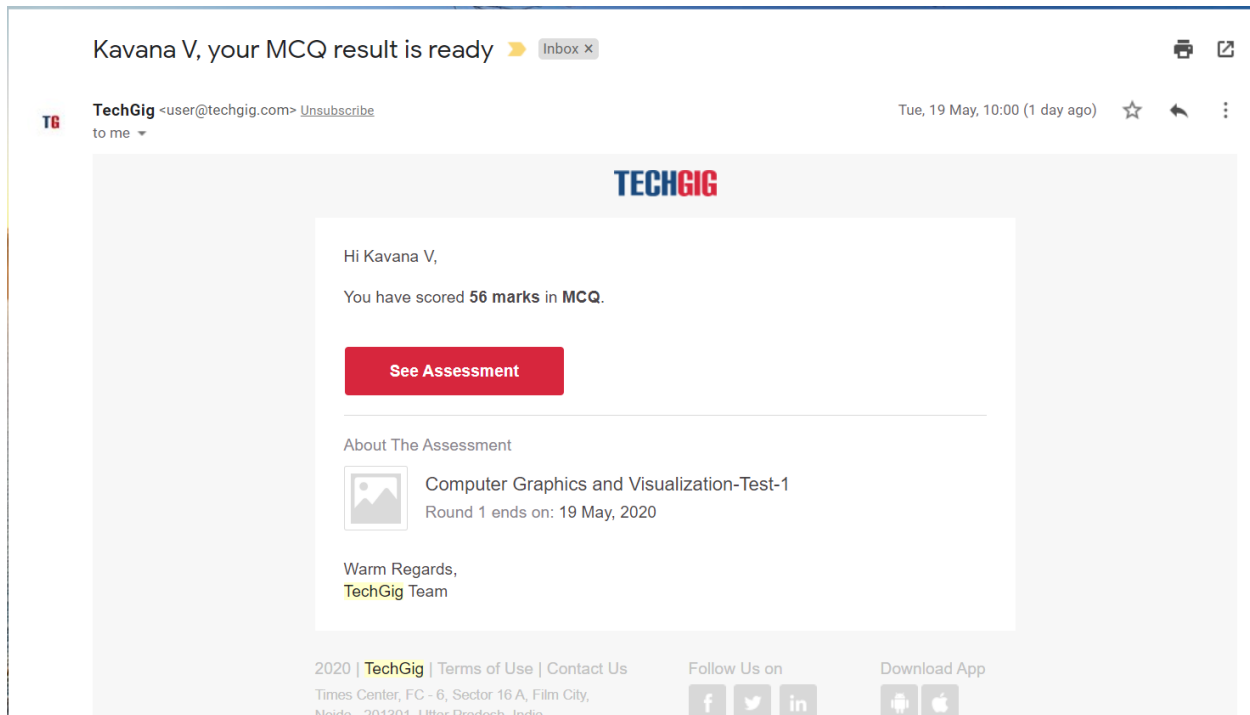


## DAILY ONLINE ACTIVITIES SUMMARY

|   |  |   |            |
|---|--|---|------------|
| Date:   | 19-05-2020                                 | Name:   | Kavana V   |
| Sem & Sec   | VI A                                       | USN:  | 4AL17CS040 |
| <b>Online Test Summary</b>  |  |   |            |
| Subject   | CGV IA Test                                |   |            |
| Max. Marks  | 60   | Score   | 56         |
| <b>Certification Course Summary</b>   |  |   |            |
| Course  | Web Development with Python and Javascript |   |            |
| Certificate Provider  | Harvard University                         | Duration  | 12 weeks   |
| <b>Coding Challenges</b>  |  |   |            |
| <b>Problem Statement:</b><br><br>1. We have a Letter or a word then we need add some letters to it and need to find out shortest palindrome<br><br>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. |  |   |            |
| <b>Status:Completed</b>   |  |   |            |
| Uploaded the report in Github   |  | Yes   |            |
| If yes Repository name  |  | <a href="https://github.com/vgkavana/Online-coding-">https://github.com/vgkavana/Online-coding-</a> |            |
| Uploaded the report in slack  |  | Yes   |            |

## Online Test Details

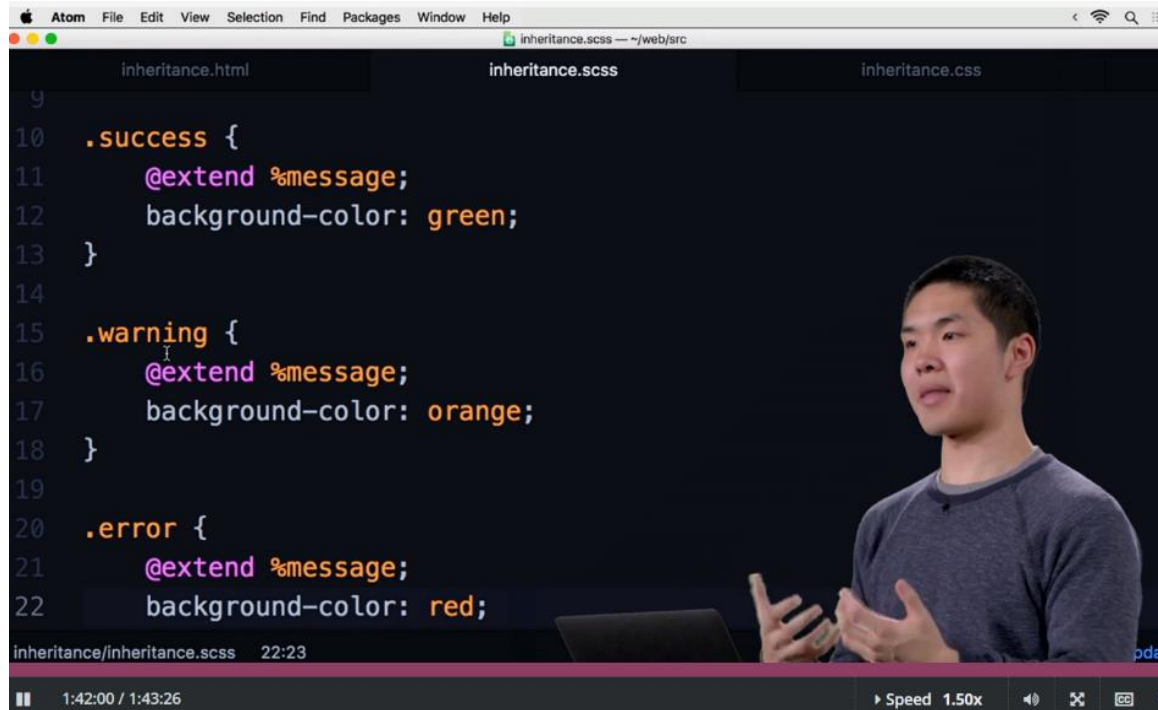
### CGV TEST Details:



## Online Certification Details

### Lesson-2

- HTML
- CSS



## Coding Challenge Details

1. We have a Letter or a word then we need add some letters to it and need to find out shortest palindrome

For 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.

```

1  import java.util.Stack;
2
3  // Data Structure to store a linked list node
4  class Node {
5      int data;
6      Node next;
7
8      Node(int i)
9      {
10         this.data = i;
11         this.next = null;
12     }
13 };
14
15 class Main
16 {
17     // Function to determine if a given linked list is palindromic
18     public static boolean isPalindrome(Node head)
19     {
20         // construct an empty stack
21         Stack<Integer> s = new Stack<>();
22
23         // push all elements of the linked list into the stack
24         Node node = head;
25         while (node != null) {
26             s.push(node.data);
27             node = node.next;
28         }
29
30         // traverse the linked list again
31         node = head;
32         while (node != null) {
33             // pop the top element from the stack
34             int top = s.pop();
35
36             // compare the popped element with current node's data
37             // return false if mismatch happens
38             if (top != node.data) {
39                 return false;
40             }
41
42             // advance to the next node
43             node = node.next;
44         }
45     }

```

```

46
47 // we reach here only when the linked list is palind
48 return true;
49 }
50
51 public static void main(String[] args)
52 {
53     Node head = new Node(1);
54     head.next = new Node(2);
55     head.next.next = new Node(3);
56     head.next.next.next = new Node(2);
57     head.next.next.next.next = new Node(1);
58
59     if (isPalindrome(head)) {
60         System.out.print("Linked List is a palindrome.");
61     } else {
62         System.out.print("Linked List is not a palindrome.");
63     }
64 }
65 }

```

✕ Terminal



```

Enter a String to find out shortest palindrom
pubg is a good game
Shortest palindrome of pubg is a good game is
emag doog a si gbupubg is a good game

Process finished.

```

2. Write a simple code to identify given linked list is palindrome or not by using stack.

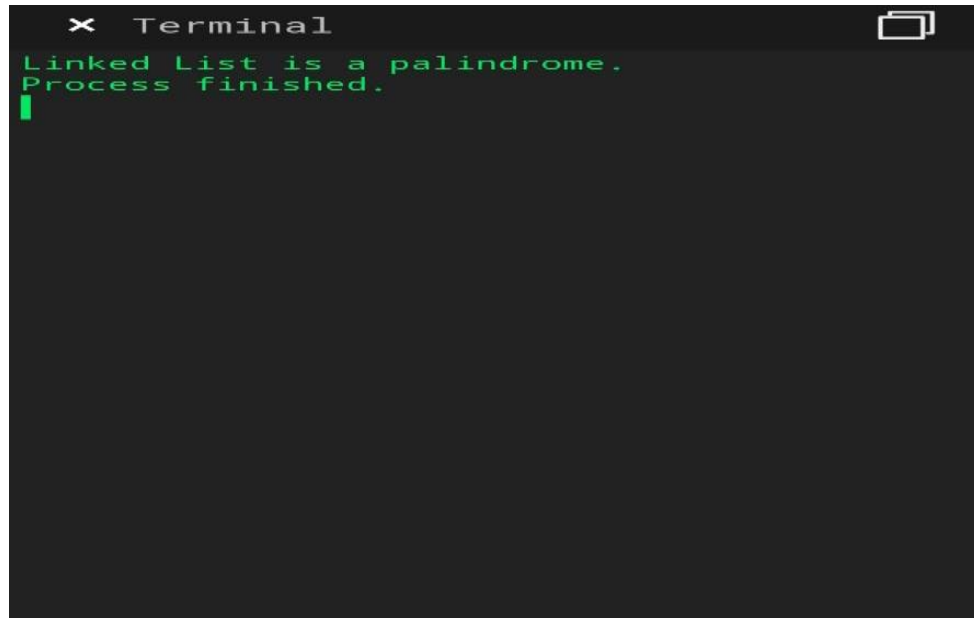
First take a Stack. Traverse through each node of the linked list and push each node value to Stack.

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.

```
1
2 import java.util.Scanner;
3
4 public class ShortestPalindromeDemo {
5
6     public static String shortestPalindrome(String str)
7
8     int x=0;
9     int y=str.length()-1;
10
11 while(y>=0){
12 if(str.charAt(x)==str.charAt(y)){
13 x++;
14 }
15 y--;
16 }
17
18 if(x==str.length())
19 return str;
20
21 String suffix = str.substring(x);
22 String prefix = new StringBuilder(suffix).reverse()
23 String mid = shortestPalindrome(str.substring(0, x))
24
25 return prefix+mid+suffix;
26 }
27
28 public static void main(String[] args)
29 {
30
31 Scanner in = new Scanner(System.in);
32
33 System.out.println("Enter a String to find out short
34
35 String str=in.nextLine();
36
37 System.out.println("Shortest palindrome of "+str+"
38
39 }
40 }
```

A screenshot of a terminal window with a dark background. The title bar at the top shows a close button (X) and the text "Terminal". In the top right corner of the terminal area, there is a small icon of two overlapping rectangles. The terminal displays two lines of green text: "Linked List is a palindrome." followed by "Process finished." on the next line. A green cursor is positioned at the start of the line following the second line of text.

```
× Terminal
Linked List is a palindrome.
Process finished.
```