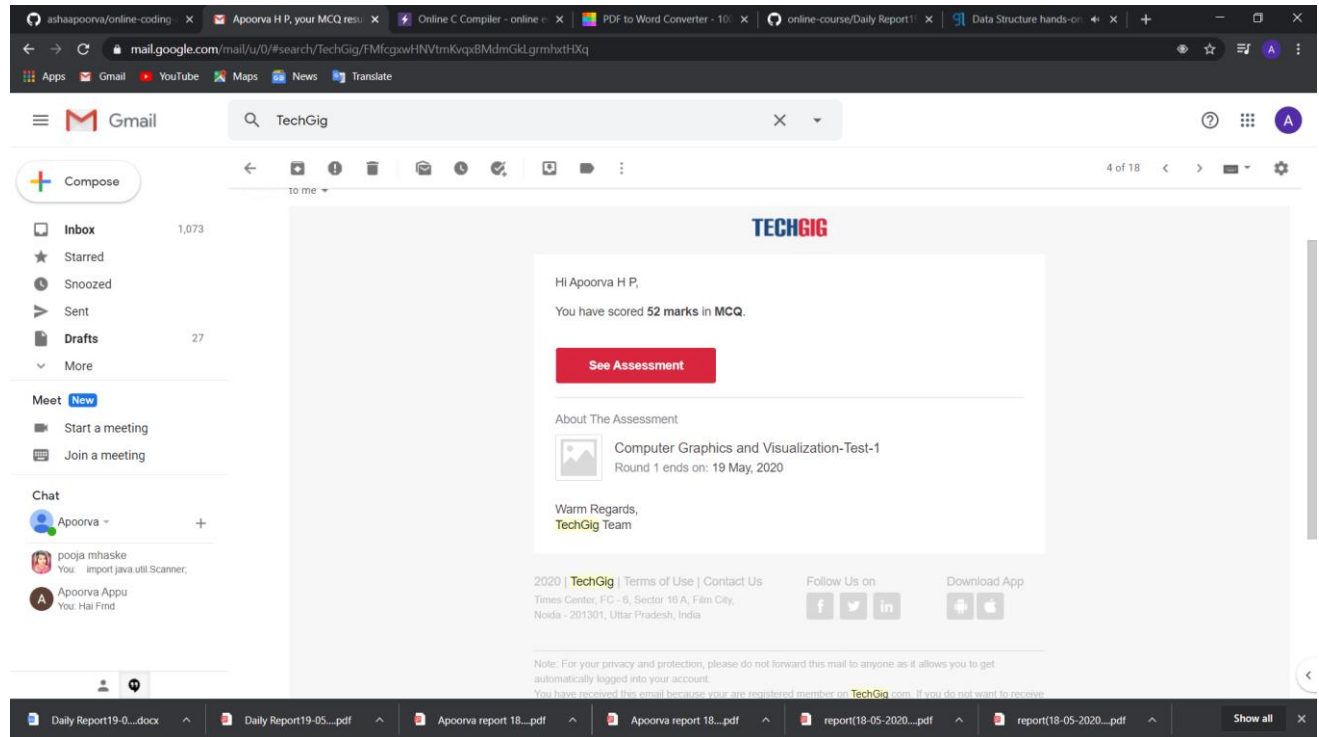


DAILY ONLINE ACTIVITIES SUMMARY

Date:	19-05-2020	Name:	Apoorva H P
Sem & Sec	VI A	USN:	4AL17CS011
Online Test Summary			
Subject	CGV IA Test		
Max. Marks	60	Score	52
Certification Course Summary			
Course	Python for Machine learning		
Certificate Provider	Great Learning	Duration	5hr
Coding Challenges			
Problem Statement: 1. We have a Letter or a word then we need add some letters to it and need to find out shortest palindrome 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. .			
Status:Completed			
Uploaded the report in Github		Yes	
If yes Repository name		https://github.com/ashaapoorva/online-coding-and-certification-course	
Uploaded the report in slack		Yes	

Online Test Details

CGV TEST Details:



Online Certification Details

Modules completed:

Jupiter Notebook Shortcut-2

Date Structure hands-on



Courses / Python for Machine Learning / Data Structure hands-on

Content

Introduction to Python

- Why Python, Python vs R, Python IDEs-2
- Anaconda installation, Intro to Jupyter Notebook-2
- Jupyter Notebook Shortcuts-2
- Data Structure hands-on
- Practice Exercise 1.ipynb
- Practice Exercise - Basics.ipynb
- Conditional Statement
- Loops
- Other Functions

Data Structure hands-on

The screenshot shows a Jupyter Notebook interface with the following content:

- Sorting a list**
Lists have a sort method which reorders the list based on the values it contains.

```
In [ ]: l2=[23,1,0,45,-1]
l2.sort()
print(l2)
```

Python also has a function sorted() which can sort the elements of a list.

```
In [ ]: l2=[23,1,0,45,-1]
print(sorted(l2))
print(l2)
```

Note : There is a difference between the sort() and sorted() function !
- Reassigning a list**

```
In [ ]: l2[2]=56
print(l2)
```

A small video thumbnail of a person is visible in the bottom right corner of the notebook preview.



Courses / Python for Machine Learning / Data Structure hands-on

Content

- Python for Machine Learning - Overview
- Course Overview
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 - Anaconda installation, Intro to Jupyter Notebook-2
 - Jupyter Notebook Shortcuts-2
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 - Practice Exercise - Basics.ipynb

Data Structure hands-on



Apoorva H P
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Settings
Logout

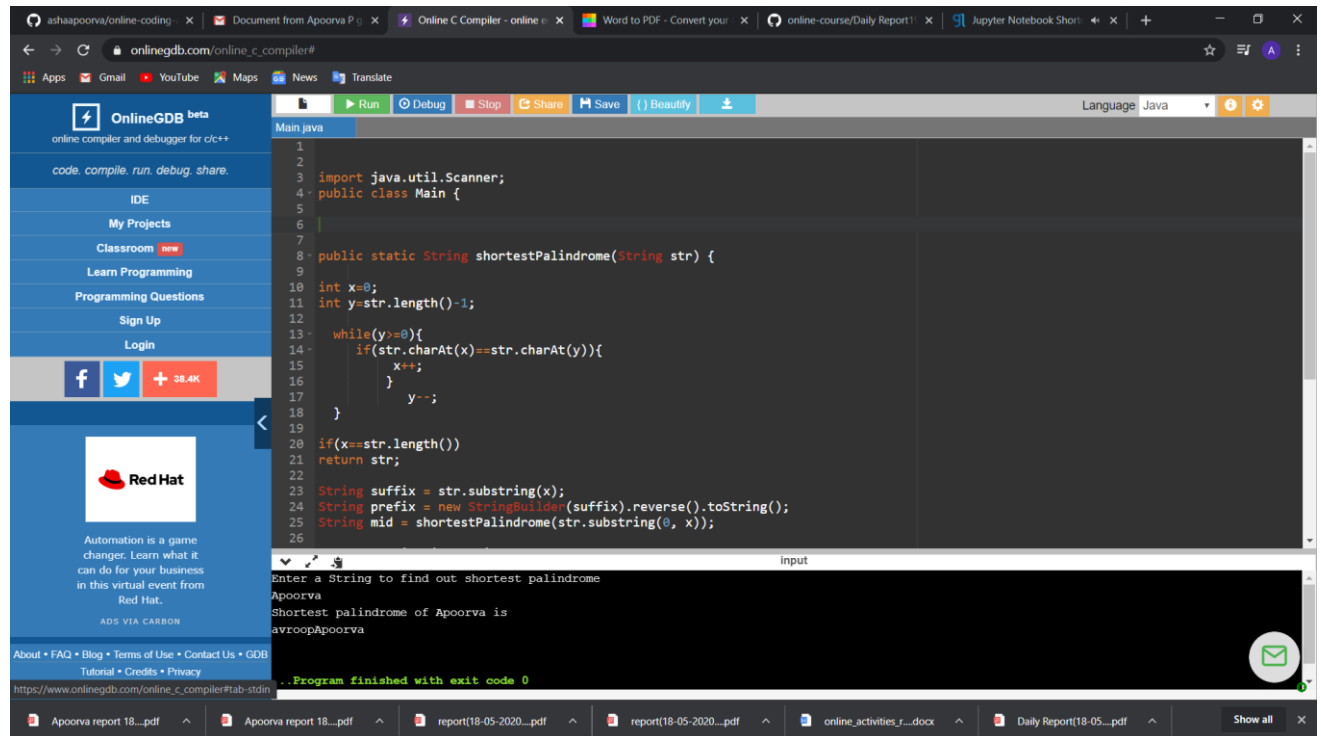
Coding Challenge Details

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

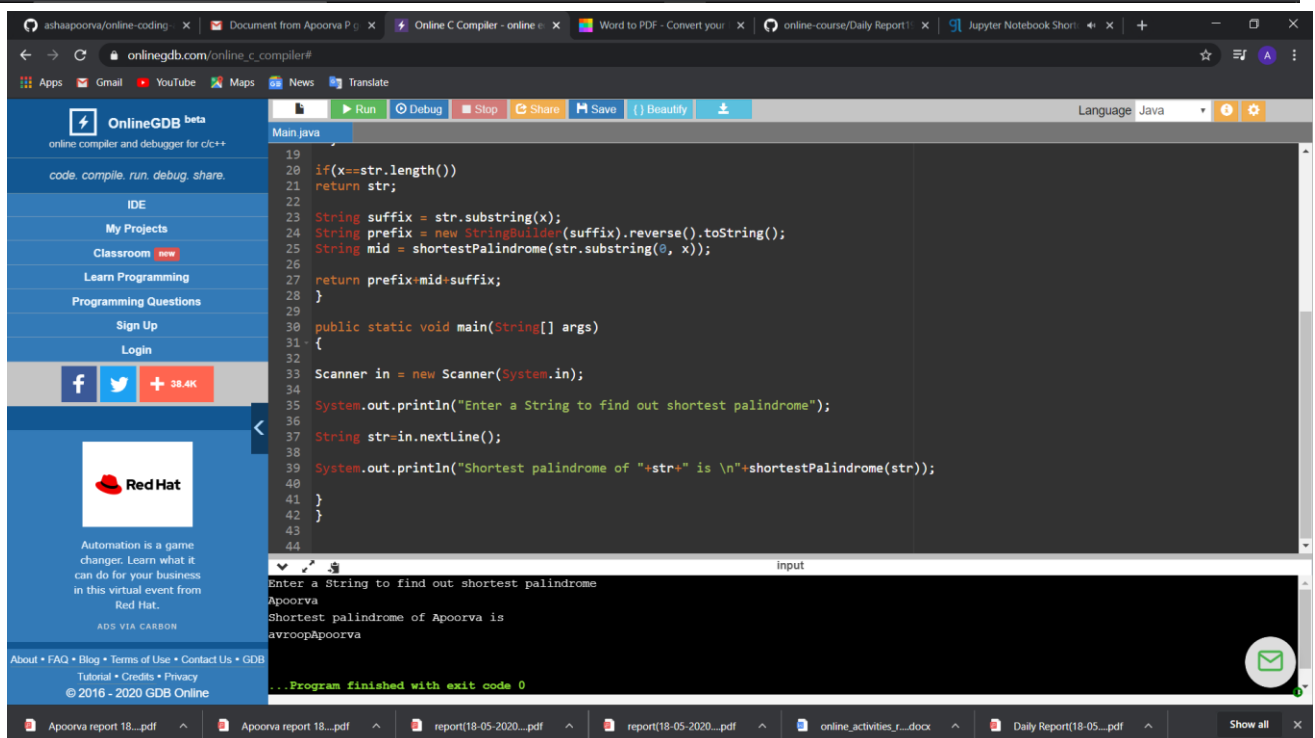
So we need to add some characters to the given string or character and find out what will be the shortest palindrome string by using simple java program.



The screenshot shows the OnlineGDB IDE interface. The left sidebar contains navigation links like 'My Projects', 'Classroom', and 'Learn Programming'. The main editor displays a Java file named 'Main.java' with the following code:

```
1
2
3 import java.util.Scanner;
4 public class Main {
5
6
7
8 public static String shortestPalindrome(String str) {
9
10 int x=0;
11 int y=str.length()-1;
12
13 while(y>=0){
14     if(str.charAt(x)==str.charAt(y)){
15         x++;
16         y--;
17     }
18 }
19
20 if(x==str.length())
21     return str;
22
23 String suffix = str.substring(x);
24 String prefix = new StringBuilder(suffix).reverse().toString();
25 String mid = shortestPalindrome(str.substring(0, x));
26 }
```

The input field shows the string 'Apoorva'. The output field displays the result: 'Shortest palindrome of Apoorva is avroopApoorva'. The status bar at the bottom indicates 'Program finished with exit code 0'.



This screenshot shows the same OnlineGDB IDE interface, but with the completed Java code. The code in 'Main.java' is as follows:

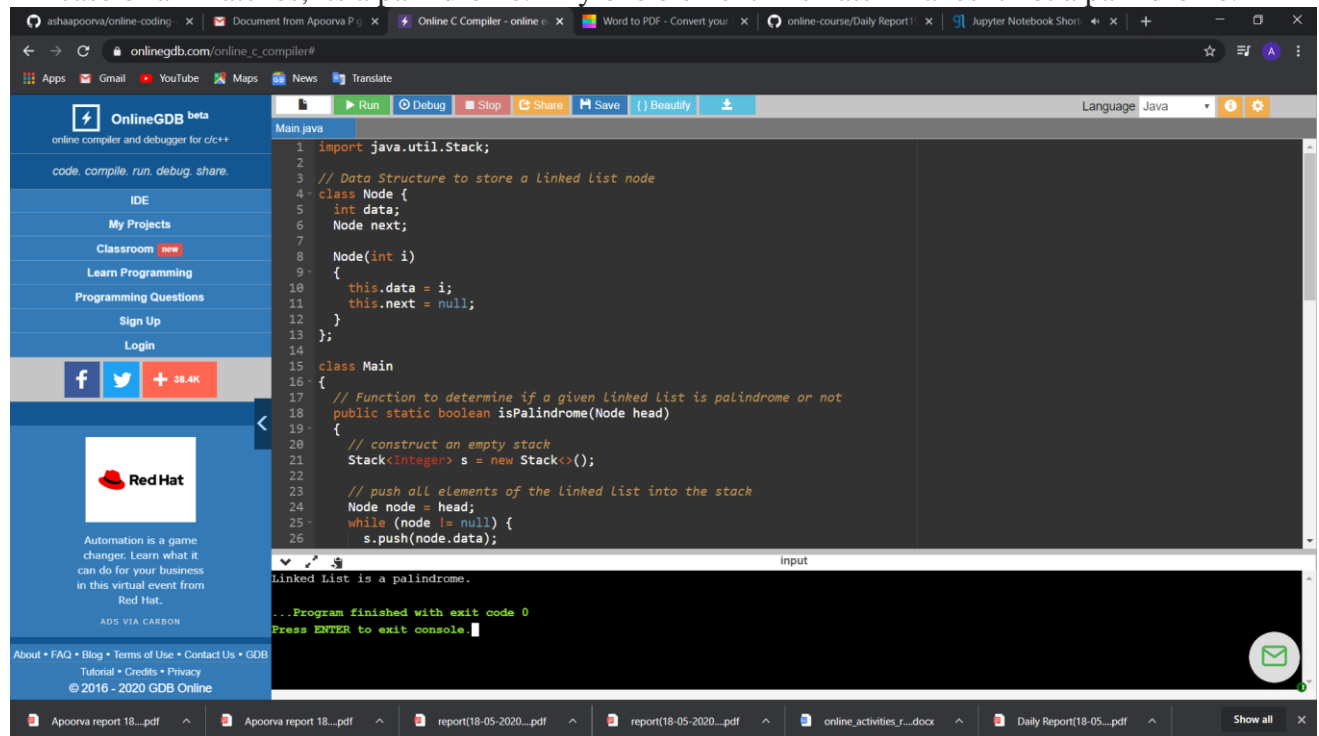
```
19
20 if(x==str.length())
21     return str;
22
23 String suffix = str.substring(x);
24 String prefix = new StringBuilder(suffix).reverse().toString();
25 String mid = shortestPalindrome(str.substring(0, x));
26
27 return prefix+mid+suffix;
28 }
29
30 public static void main(String[] args)
31 {
32
33 Scanner in = new Scanner(System.in);
34
35 System.out.println("Enter a String to find out shortest palindrome");
36
37 String str=in.nextLine();
38
39 System.out.println("Shortest palindrome of "+str+" is \n"+shortestPalindrome(str));
40
41 }
42
43
44 }
```

The input field still shows 'Apoorva', and the output field shows the same result: 'Shortest palindrome of Apoorva is avroopApoorva'. The status bar at the bottom indicates 'Program finished with exit code 0'.

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.

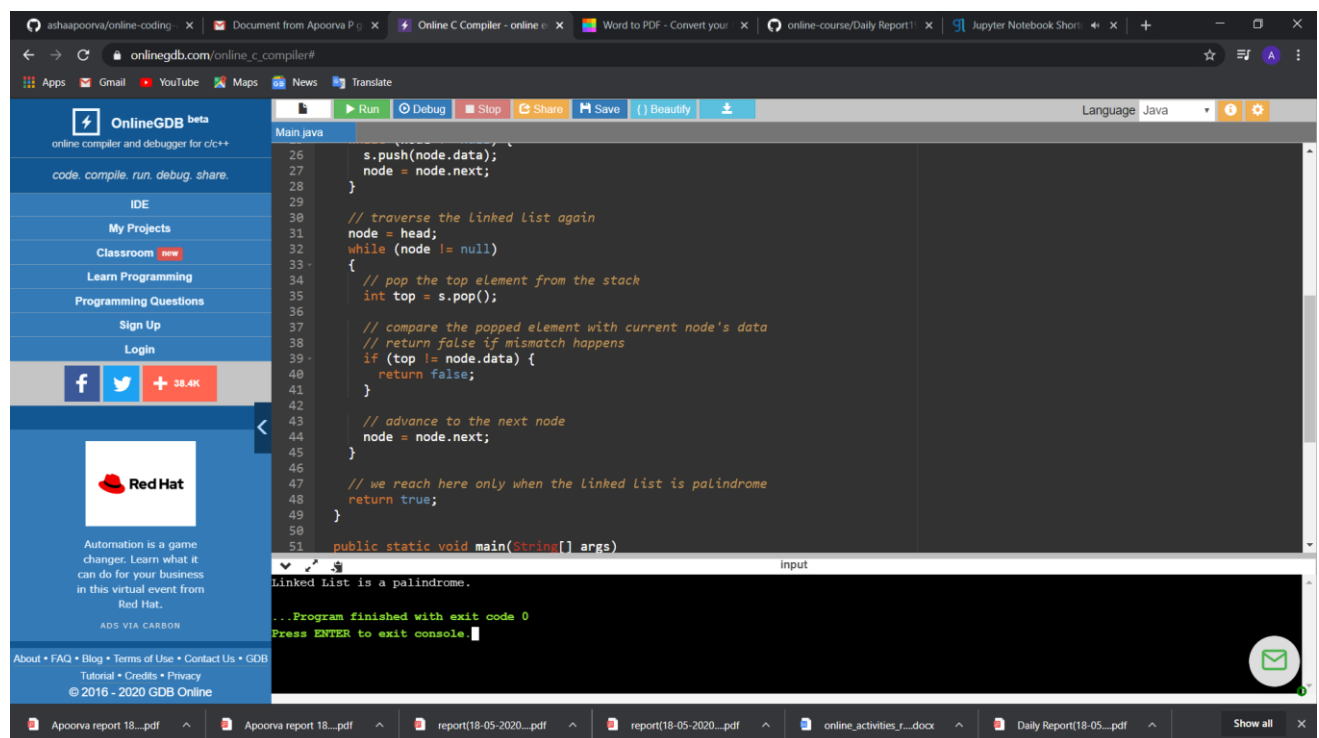
In case of all matches, its a palindrome. Any one element mismatch makes it not a palindrome.



The screenshot shows the OnlineGDB IDE interface. The left sidebar contains navigation links like 'code, compile, run, debug, share.', 'IDE', 'My Projects', 'Classroom', 'Learn Programming', 'Programming Questions', 'Sign Up', and 'Login'. The main editor area displays a Java file named 'Main.java' with the following code:

```
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 palindrome or not
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);
```

The console output at the bottom shows: 'Linked List is a palindrome.' and '...Program finished with exit code 0'. The browser's address bar shows 'onlinegdb.com/online_c_compiler#'. The bottom of the browser window shows several open tabs, including 'Apoorva report 18...', 'report(18-05-2020...', and 'online_activities_r...docx'.



This screenshot shows the continuation of the Java code in the OnlineGDB IDE. The code continues from the previous snippet:

```
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         {
34             // pop the top element from the stack
35             int top = s.pop();
36
37             // compare the popped element with current node's data
38             // return false if mismatch happens
39             if (top != node.data) {
40                 return false;
41             }
42
43             // advance to the next node
44             node = node.next;
45         }
46
47         // we reach here only when the Linked List is palindrome
48         return true;
49     }
50
51     public static void main(String[] args)
```

The console output remains the same: 'Linked List is a palindrome.' and '...Program finished with exit code 0'. The browser interface and tabs are consistent with the previous screenshot.