

Q1: The Palindrome Checker program is designed to determine whether a given word is a palindrome or not. A palindrome is a word, phrase, number, or sequence of characters that reads the same forwards and backwards.

The program prompts the user to enter a word and then checks if it is a palindrome. It accomplishes this by comparing the input word with its reverse. If the word and its reverse are identical, the program concludes that the word is a palindrome; otherwise, it determines that the word is not a palindrome.

CODE SNIPPET 1:

```
str = input ("Enter the Word to check if it is a palindrome or not: ")

str = str.casefold ()

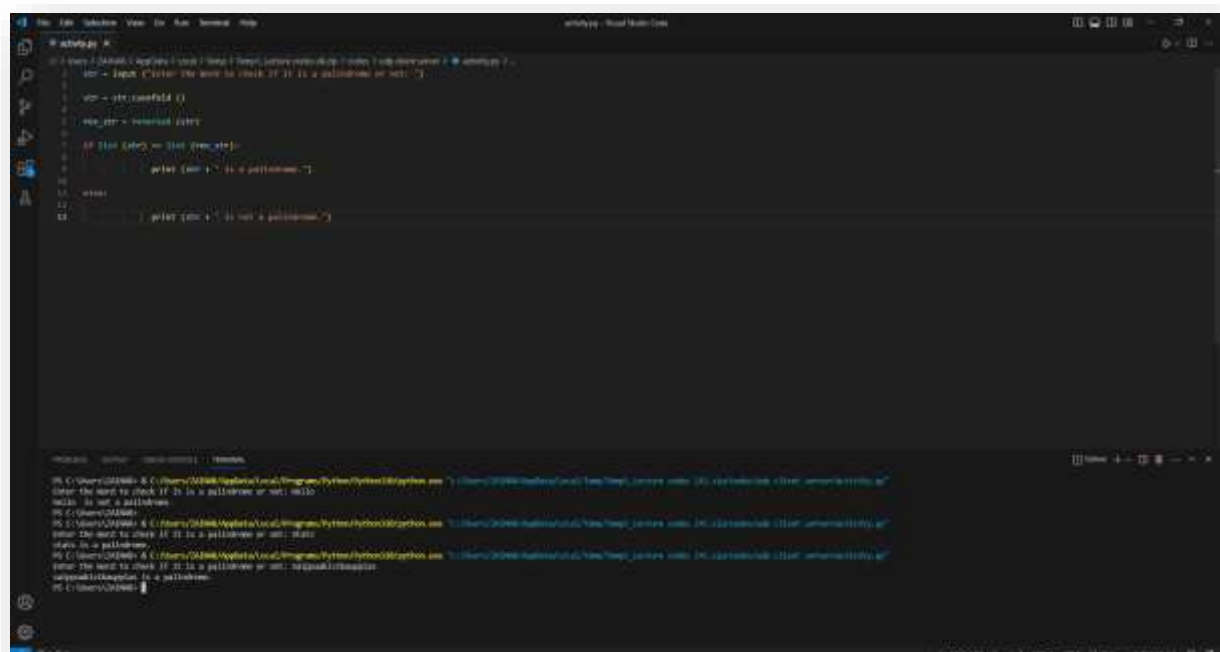
rev_str = reversed (str)

if list (str) == list (rev_str):

    print (str + " is a palindrome.")

else:

    print (str + " is not a palindrome.")
```



The screenshot shows a Python IDE with the following code in the editor:

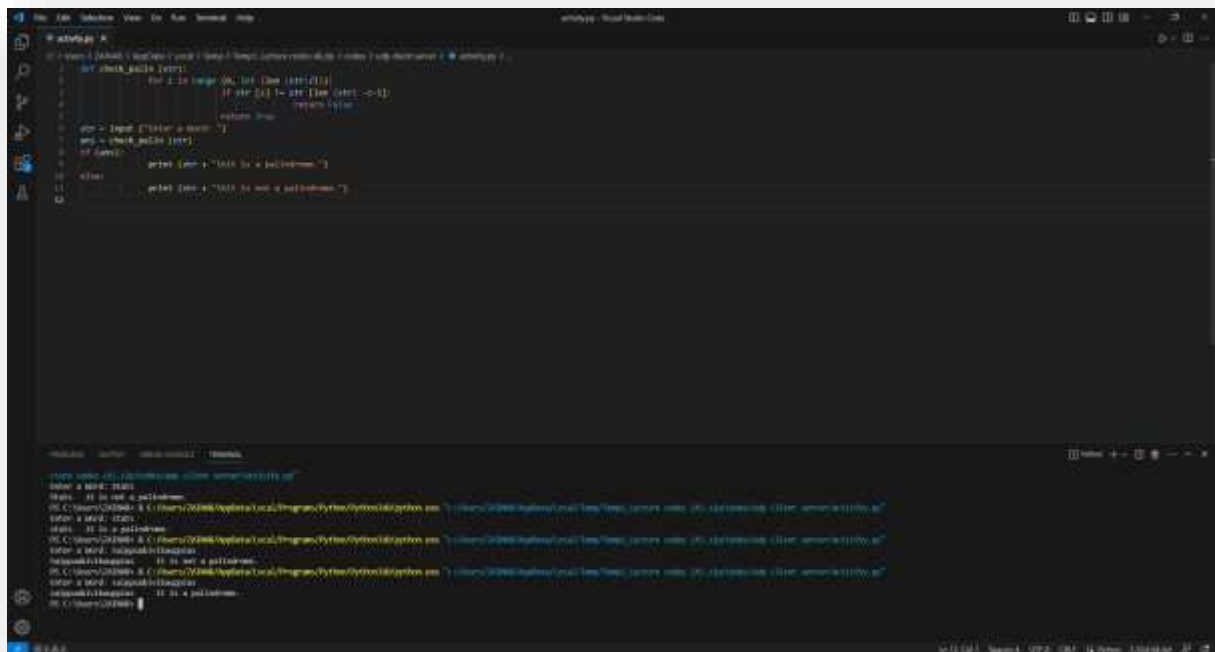
```
str = input ("Enter the Word to check if it is a palindrome or not: ")
str = str.casefold ()
rev_str = reversed (str)
if list (str) == list (rev_str):
    print (str + " is a palindrome.")
else:
    print (str + " is not a palindrome.")
```

The output window shows the program's execution:

```
C:\Users\Zainab> python palindrome.py
Enter the word to check if it is a palindrome or not: hello
hello is not a palindrome
C:\Users\Zainab> python palindrome.py
Enter the word to check if it is a palindrome or not: madam
madam is a palindrome
C:\Users\Zainab> python palindrome.py
Enter the word to check if it is a palindrome or not: happyday
happyday is not a palindrome
C:\Users\Zainab>
```

CODE SNIPPET 2:

```
def check_palin (str):  
    for z in range (0, int (len (str)/2)):  
        if str [z] != str [len (str) -z-1]:  
            return False  
    return True  
  
str = input ("Enter a Word: ")  
ans = check_palin (str)  
if (ans):  
    print (str + "\nit is a palindrome.")  
else:  
    print (str + "\nit is not a palindrome.")
```



The screenshot shows a code editor with the same Python code as in the snippet above. Below the code editor, the output of the program is displayed. It shows three test cases where the user enters a word, and the program outputs whether it is a palindrome or not. The first two cases are 'level' and 'noon', both of which are palindromes. The third case is 'python', which is not a palindrome.

```
Enter a Word: level  
level is a palindrome.  
Enter a Word: noon  
noon is a palindrome.  
Enter a Word: python  
python is not a palindrome.
```