

AI ASSISTED CODING
LAB TEST-1 (26-08-2025)

TASK-1:

PROMPT: write a simple python code to generate and check the given string is palindrome or not using function.

Code:

```
1.py
1  #write a simple python code to generate and check the given string is palindrome or not using function
2  def is_palindrome(string):
3      cleaned = string.replace(" ", "").lower()
4      return cleaned == cleaned[::-1]
5
6  def main():
7      print("Palindrome Checker")
8      print("=" * 20)
9
10     test_cases = ["racecar", "hello", "Madam", ]
11
12     for test in test_cases:
13         result = is_palindrome(test)
14         print(f'{test}' -> {result} Palindrome" if result else f'{test}' -> {result} Not Palindrome")
15
16     while True:
17         user_input = input("\nEnter a string (or 'quit'): ").strip()
18         if user_input.lower() == 'quit':
19             break
20         if user_input:
21             result = is_palindrome(user_input)
22             print(f'{user_input}' -> {result} Palindrome" if result else f'{user_input}' -> {result} Not Palindrome")
23
24 if __name__ == "__main__":
25     main()
```

Output:

```
PS C:\ai exam> & 'c:\Users\Poojasree\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\Poojasree\.cursor\extensions\ms-python.debugpy-2025.6.0-win32-x64\bundled\libs\debugpy\launcher' '58561' '--' 'C:\ai exam\1.py'
Palindrome Checker
=====
'racecar' -> True Palindrome
'hello' -> False Not Palindrome
'Madam' -> True Palindrome

Enter a string (or 'quit'): lol
'lol' -> True Palindrome

Enter a string (or 'quit'): █
```

Explanation:

Palindrome Checker - Short Note

Function: `is_palindrome()` removes spaces, converts to lowercase, and checks if string equals its reverse using `string[::-1]`.

Test Cases: Automatically tests "racecar", "hello", "Madam", and "12321" to show results.

Output Format: Displays "True Palindrome" for palindromes and "False Not Palindrome" for non-palindromes.

Interactive Mode: Continuously accepts user input, checks if palindromes, and shows results until user types 'quit'.

Execution: Uses `if __name__ == "__main__":` to run main function only when script is executed directly.

TASK-2:

PROMPT: Generate a python program to find the largest and smallest numbers in a list provided by user.

Code , output,explanation:

```
2.py
1 # generate a python program to find the largest and smallest number in a list provided by user
2
3 numbers = []
4 while True:
5     user_input = input("Enter number (or 'done'): ")
6     if user_input.lower() == 'done': break
7     try: numbers.append(float(user_input))
8     except: print("Invalid input")
9
10
11 if numbers:
12     print(f"Largest: {max(numbers)}")
13     print(f"Smallest: {min(numbers)}")
14 else:
15     print("No numbers entered.")
16
```

Input Collection Loop

The code uses a while True loop to continuously ask the user for numbers. It prompts with "Enter number (or 'done'): " and keeps running until the user types 'done' to exit the loop.

Summary: Python Program to Find Largest and Smallest Numbers

The program works in four main steps:

1. **Input Loop:** Continuously asks for numbers until user types 'done'
2. **Validation:** Converts each input to a number and stores valid ones in a list
3. **Check:** Verifies that numbers were actually entered before proceeding
4. **Output:** Uses `max()` and `min()` functions to find and display the largest and smallest numbers from the user's input

Key Features:

- Handles invalid inputs gracefully without crashing
- Stores all valid numbers in a list
- Provides clear output showing both extremes
- Simple and efficient using Python's built-in functions

The code is concise (10 lines) and accomplishes the task of finding the range extremes in any user-provided list of numbers.

Review Changes

1 Tab 6.9%

Plan, search, build anything

```
PS C:\ai exam> & 'c:\Users\Poojasree\AppData\Local\Programs\Python\Python313\python.exe' 'c:\Users\Poojasree\.cursor\extensions\ms-python.debugpy-2025.6.0-win32-x64\bundled\libs\debugpy\launcher' '58803' '--' 'C:\ai exam\2.py'
Enter number (or 'done'): 1
Enter number (or 'done'): 18
Enter number (or 'done'): 45
Enter number (or 'done'): 86
Enter number (or 'done'): 12
Enter number (or 'done'): done
Largest: 86.0
Smallest: 1.0
PS C:\ai exam>
```