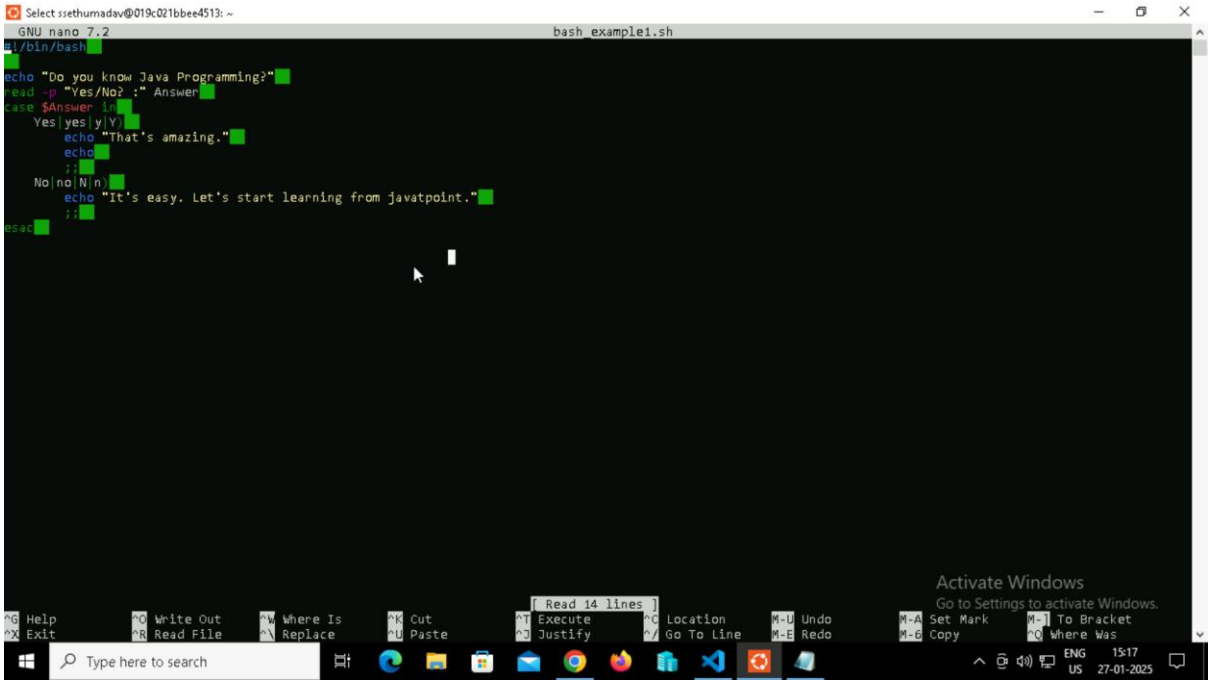
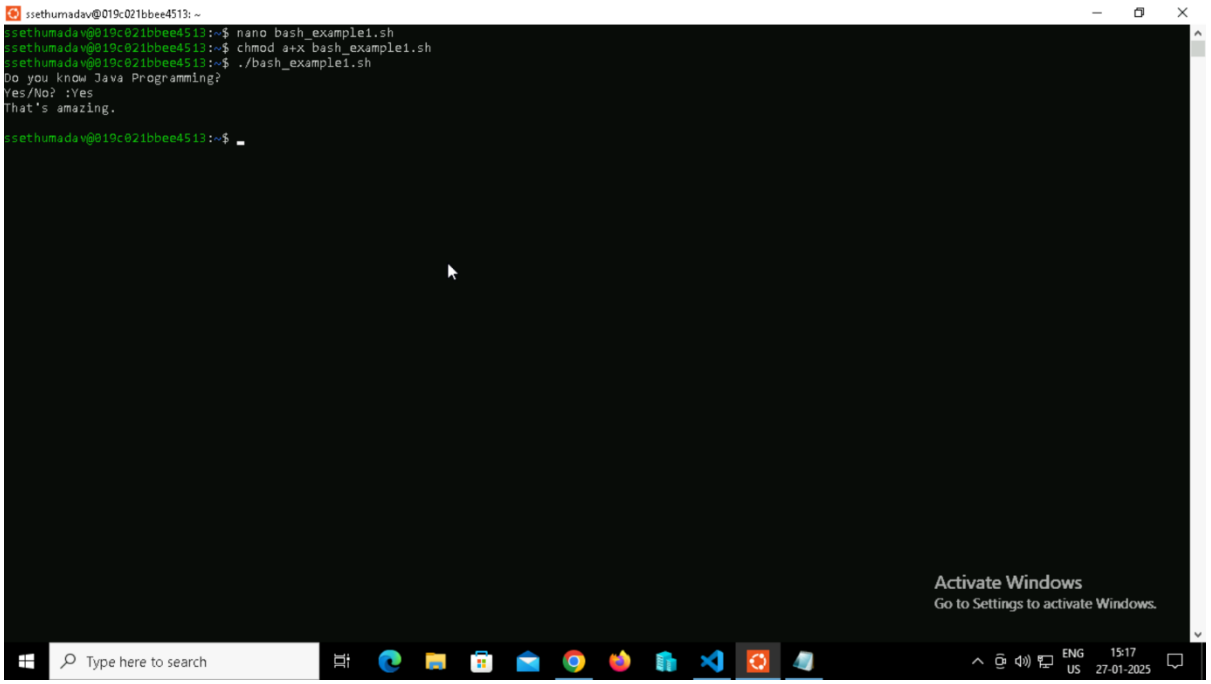
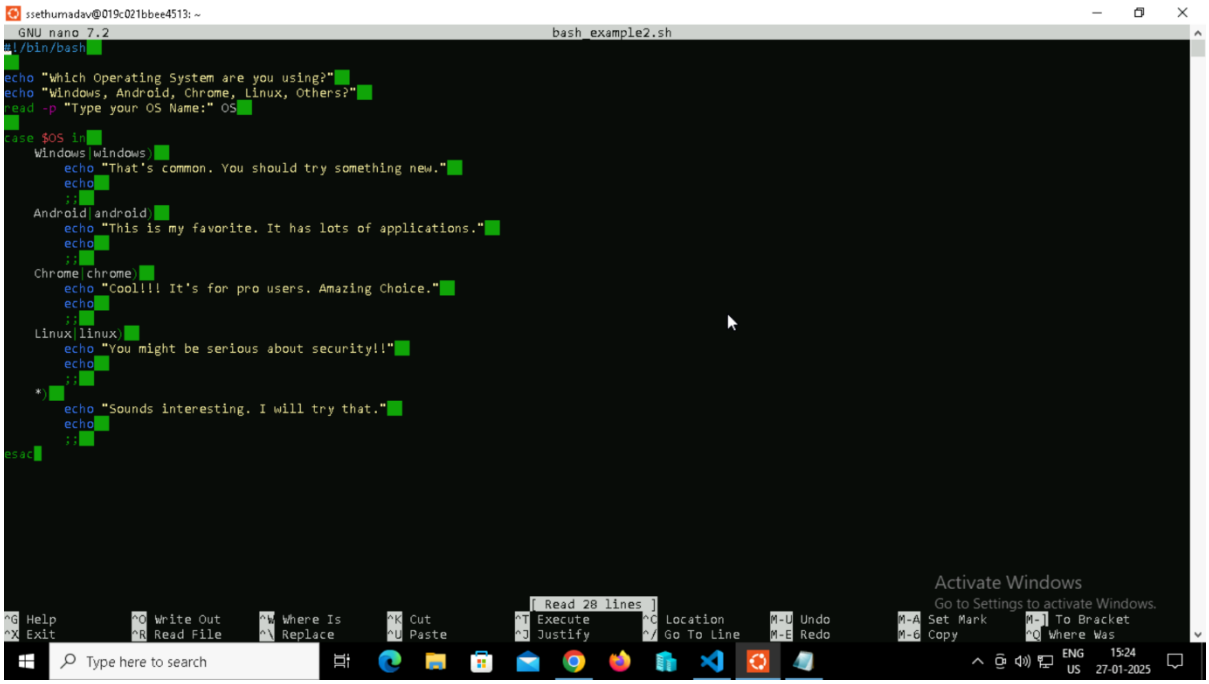
BASH PROJECT:

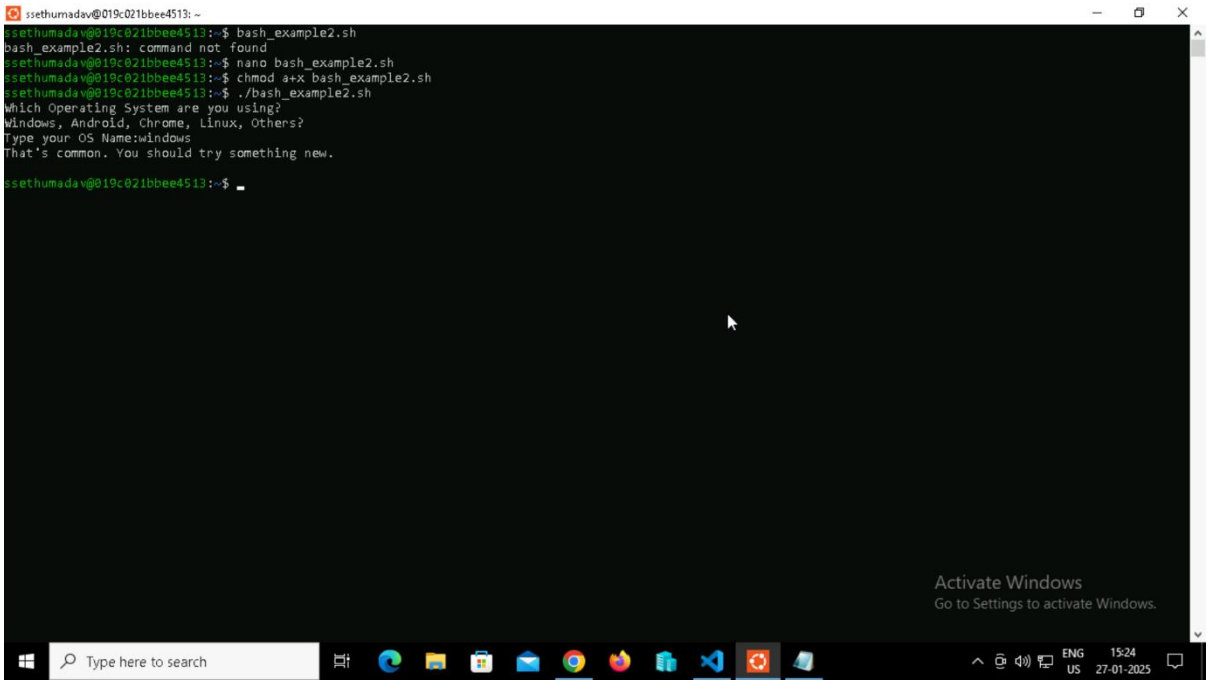
example 1- (In this example, we have defined a simple scenario to demonstrate the use of the case statement.)





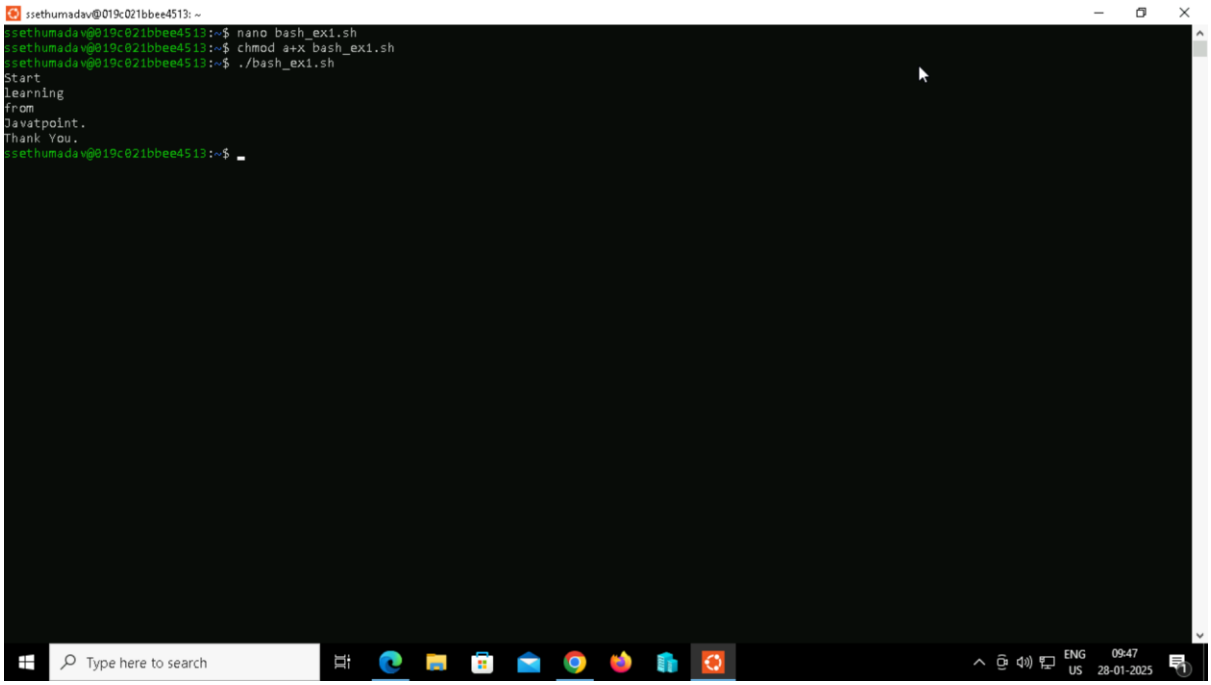
EXAMPLE2: (In this example, we have defined a combined scenario where there is also a default case when no previous matched case is found.)

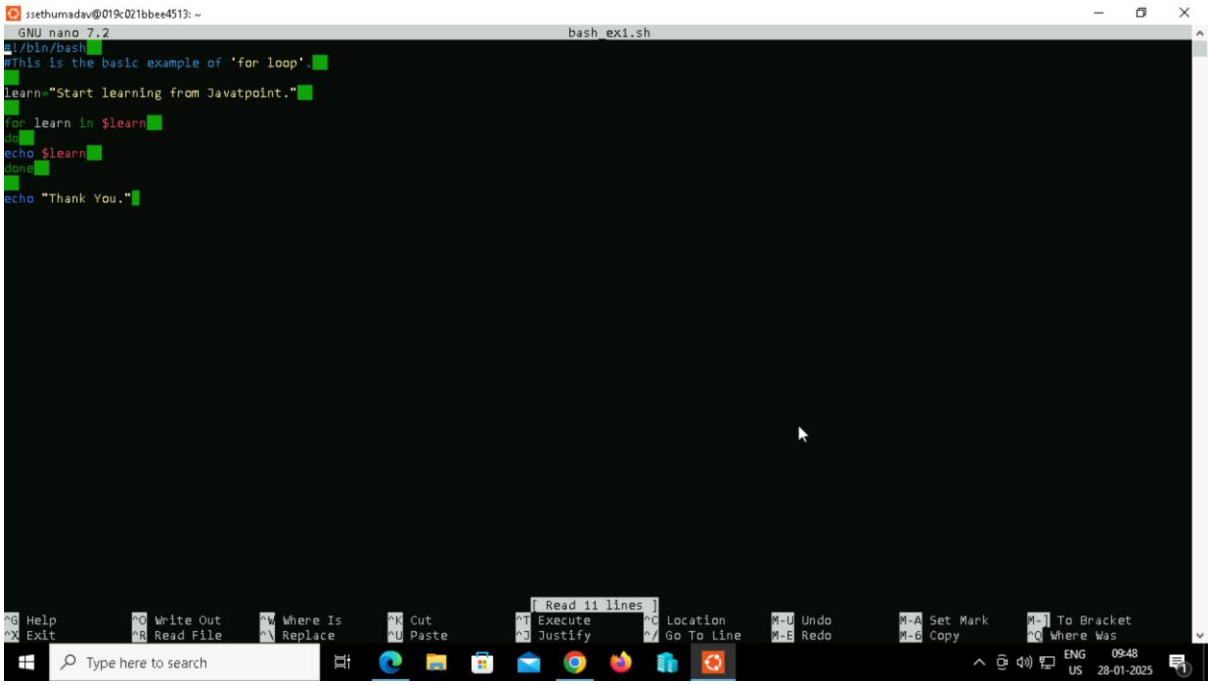




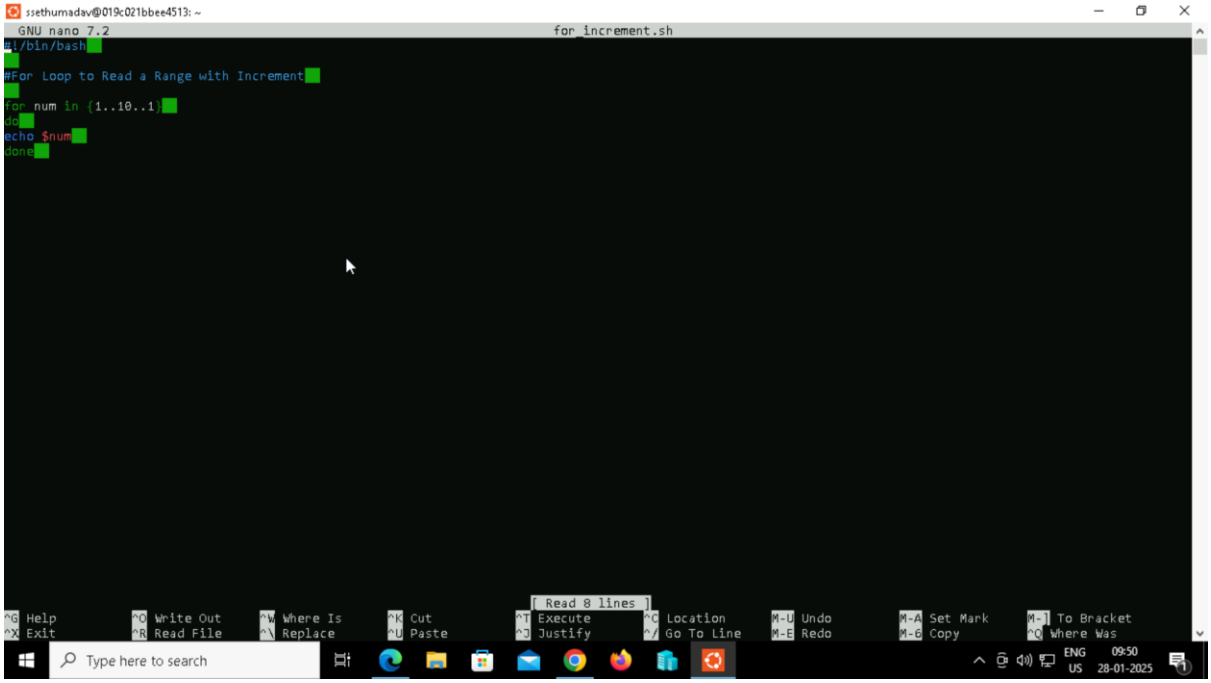
BASH FOR LOOP EXAMPLES:

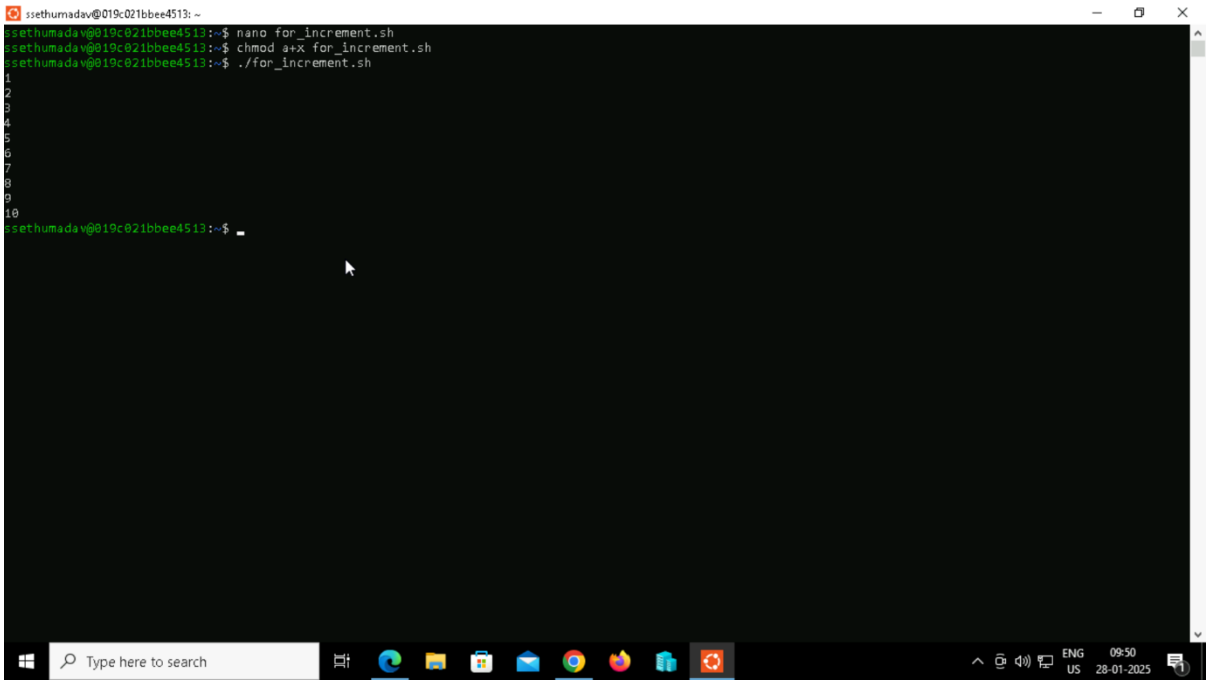
Example1:



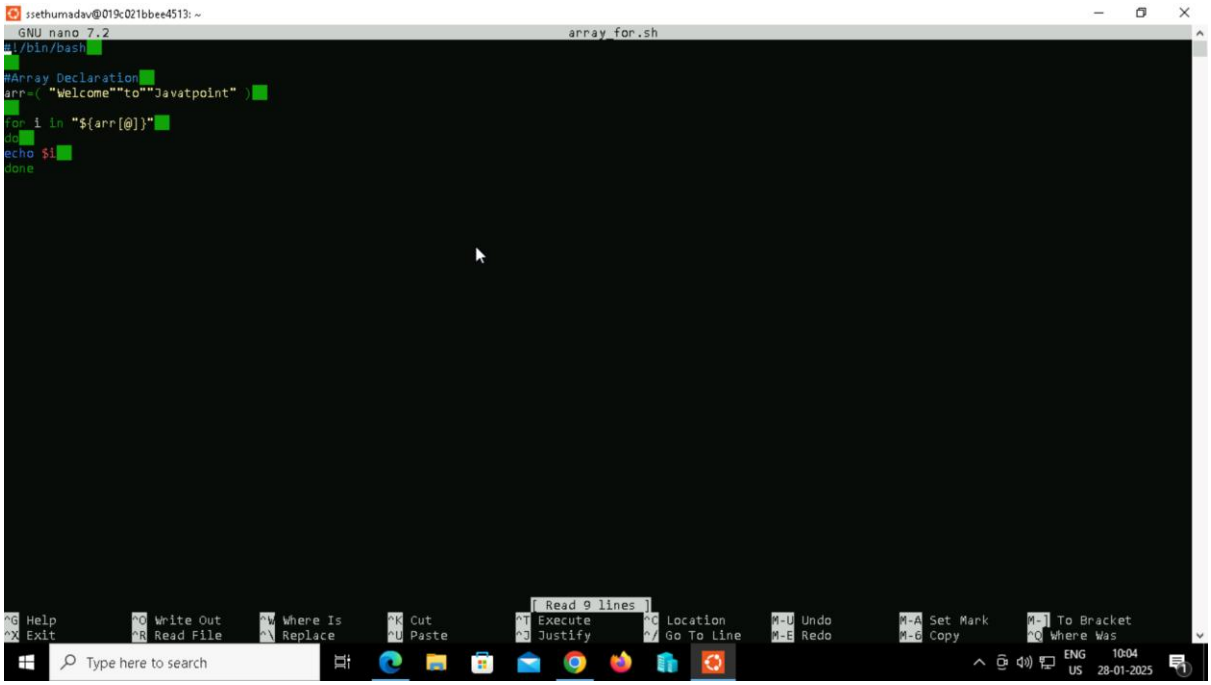


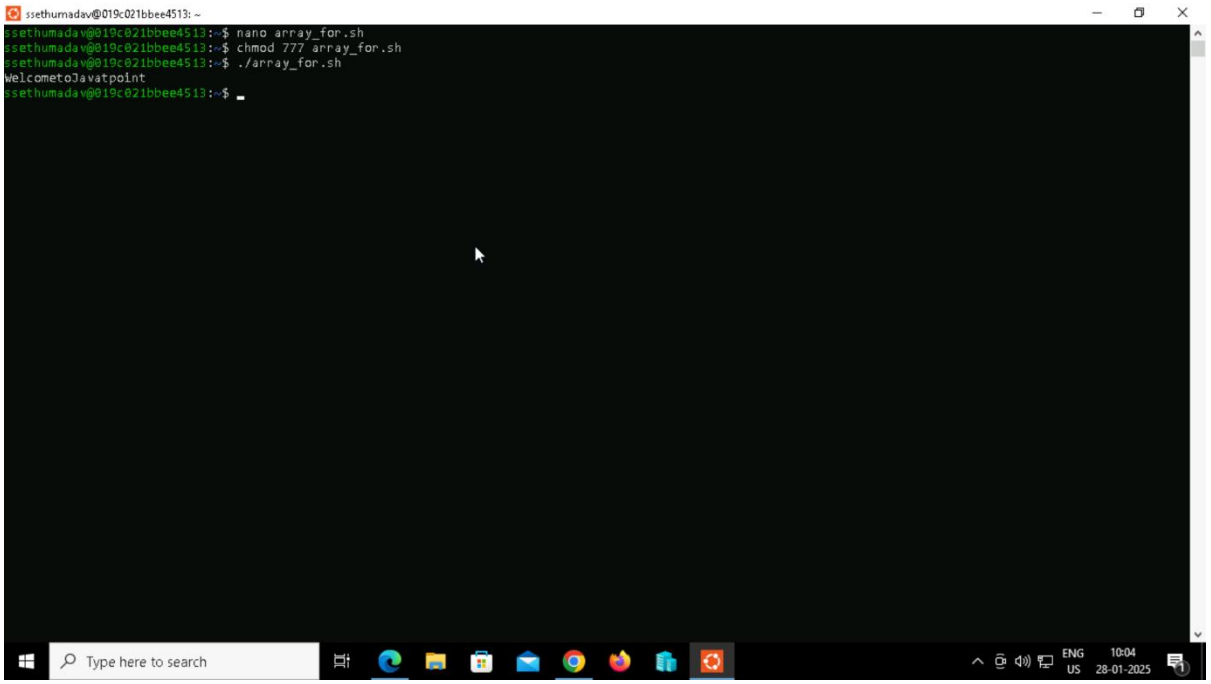
Example 2:for increment



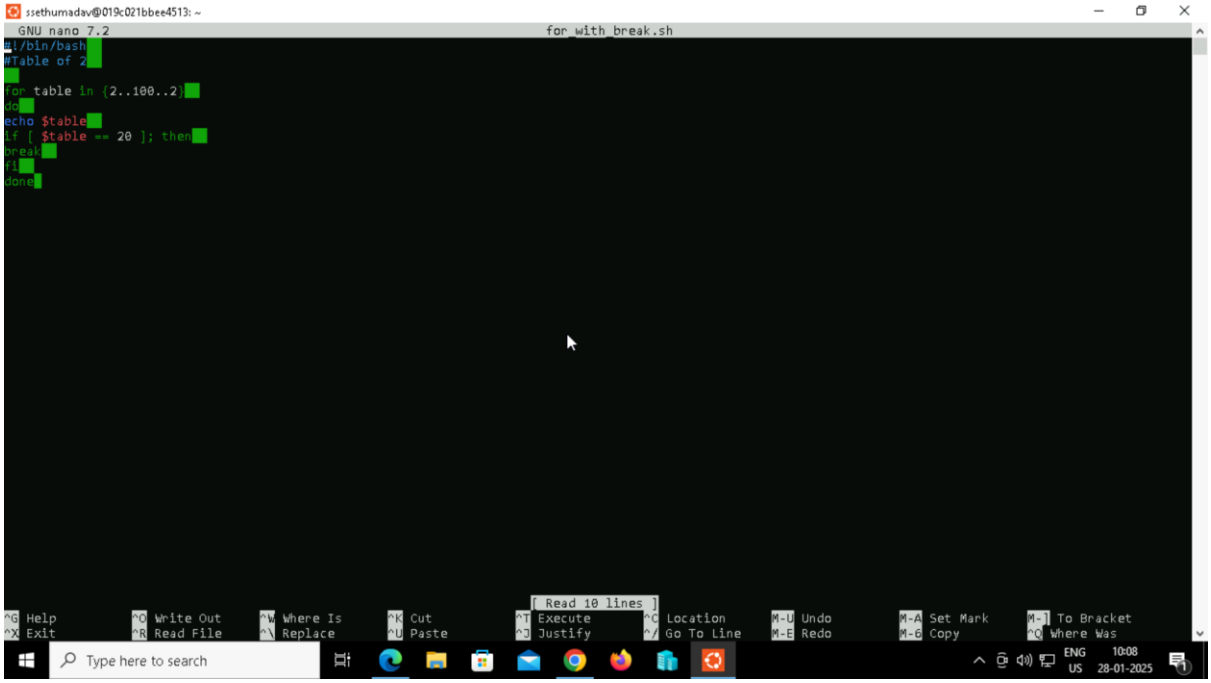


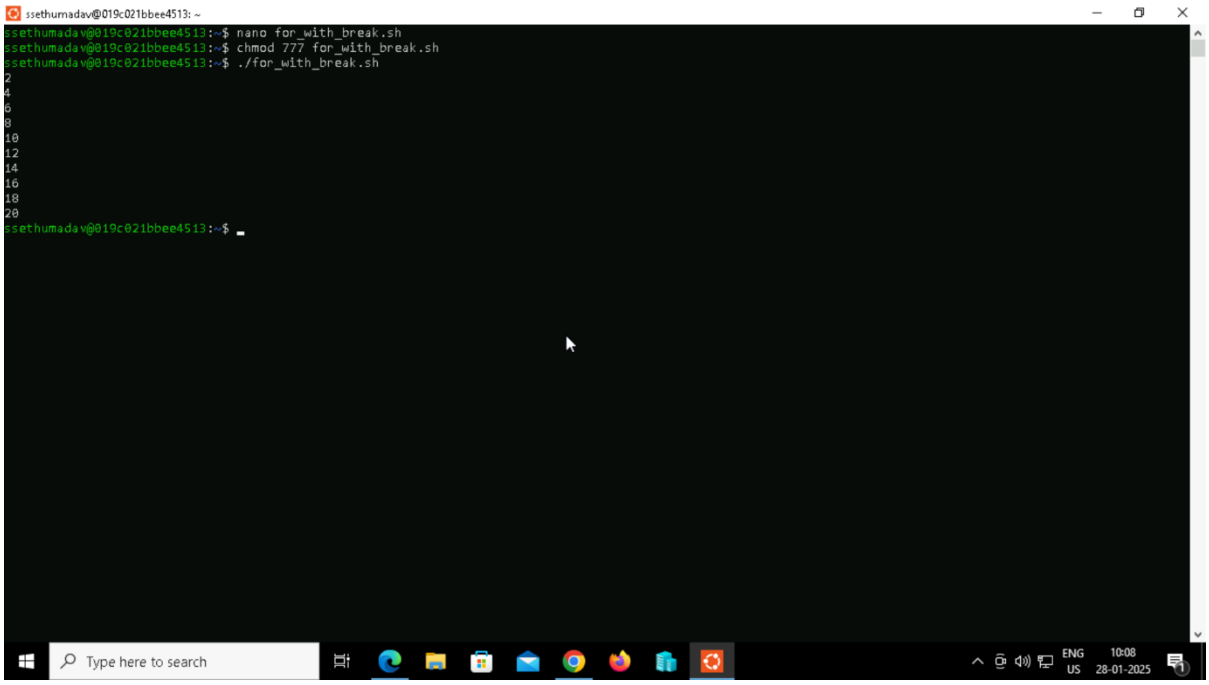
Example 3:for loop to read array variables using bash:





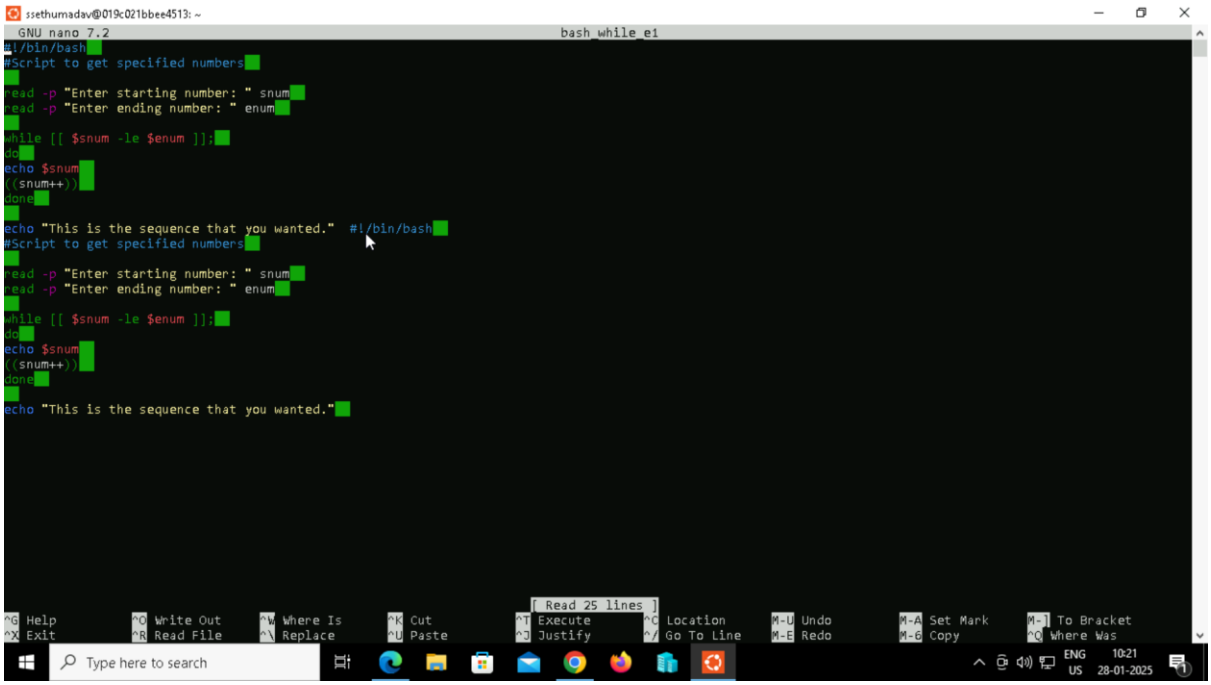
Example 4: for loop with break statement:

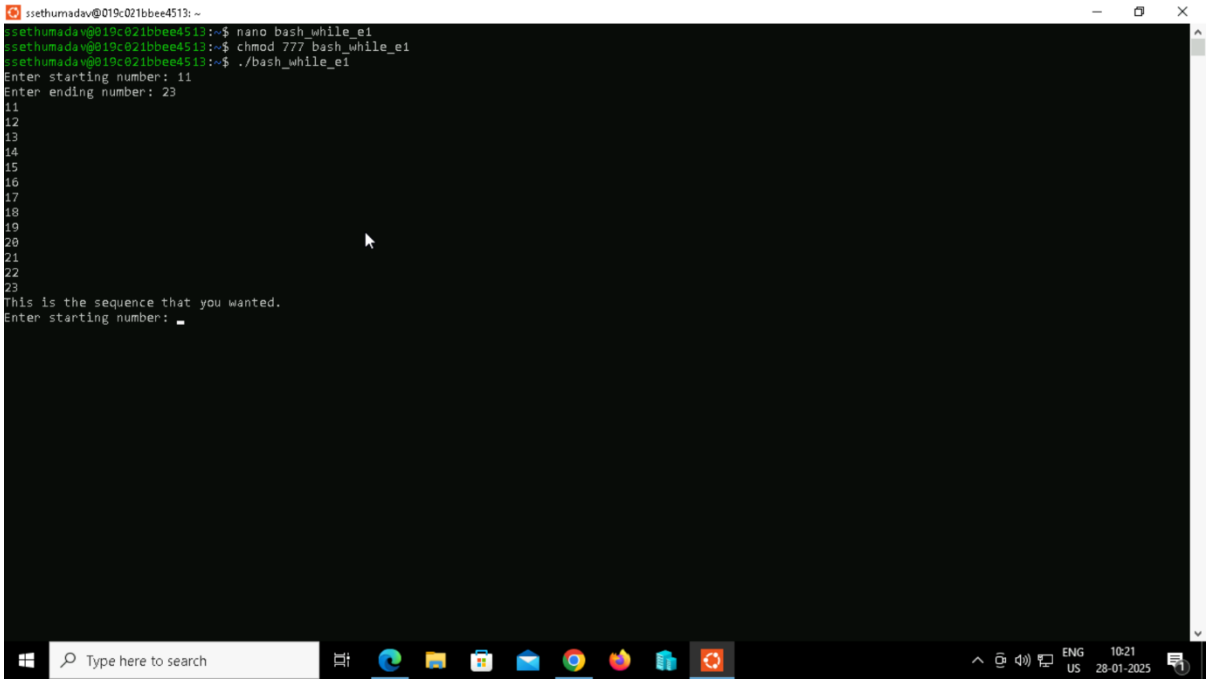




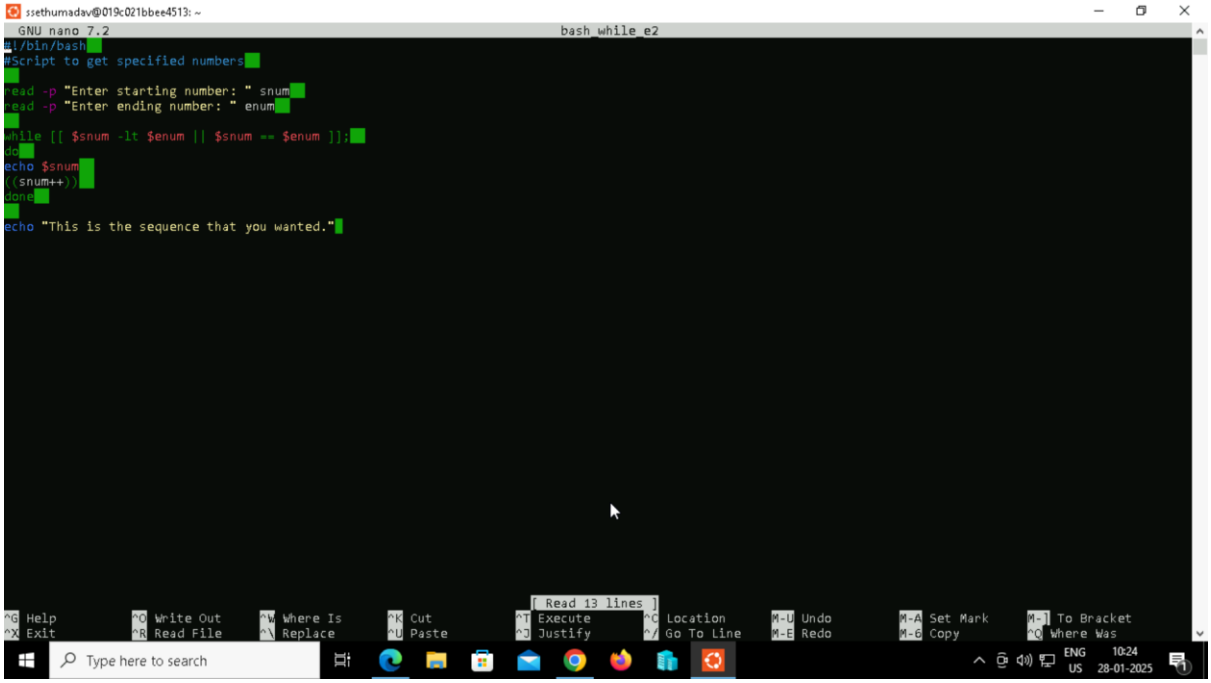
Bash While loops example:

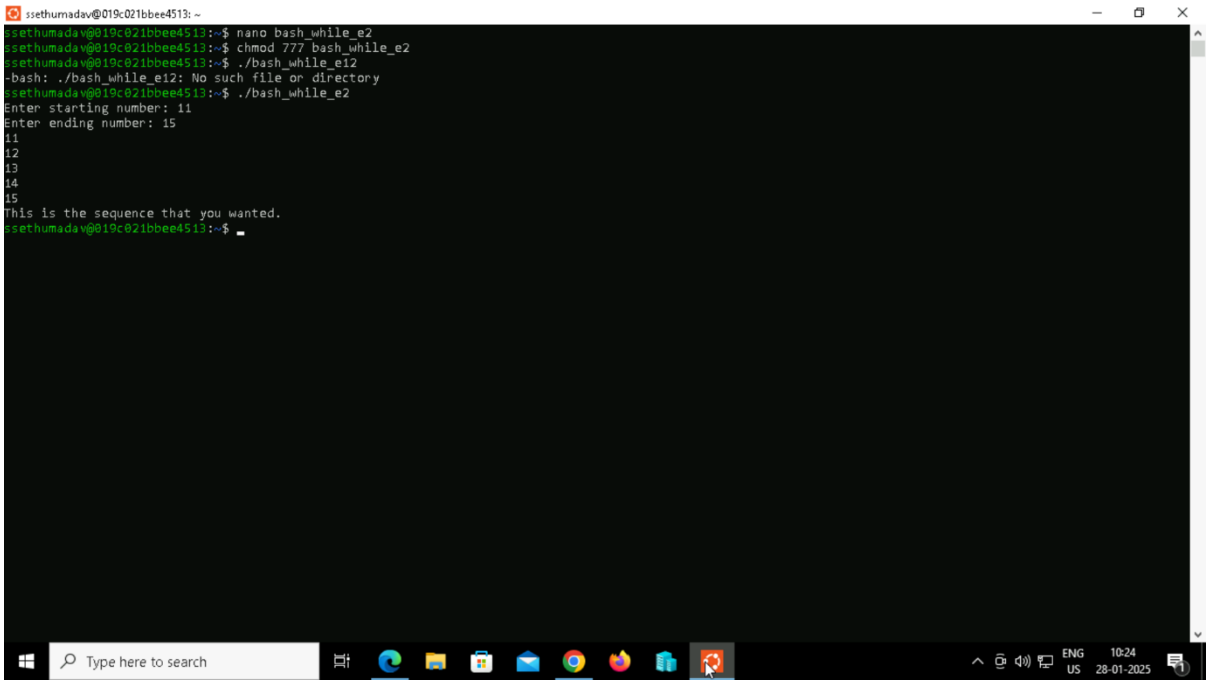
Example 1:while loop with single condition:



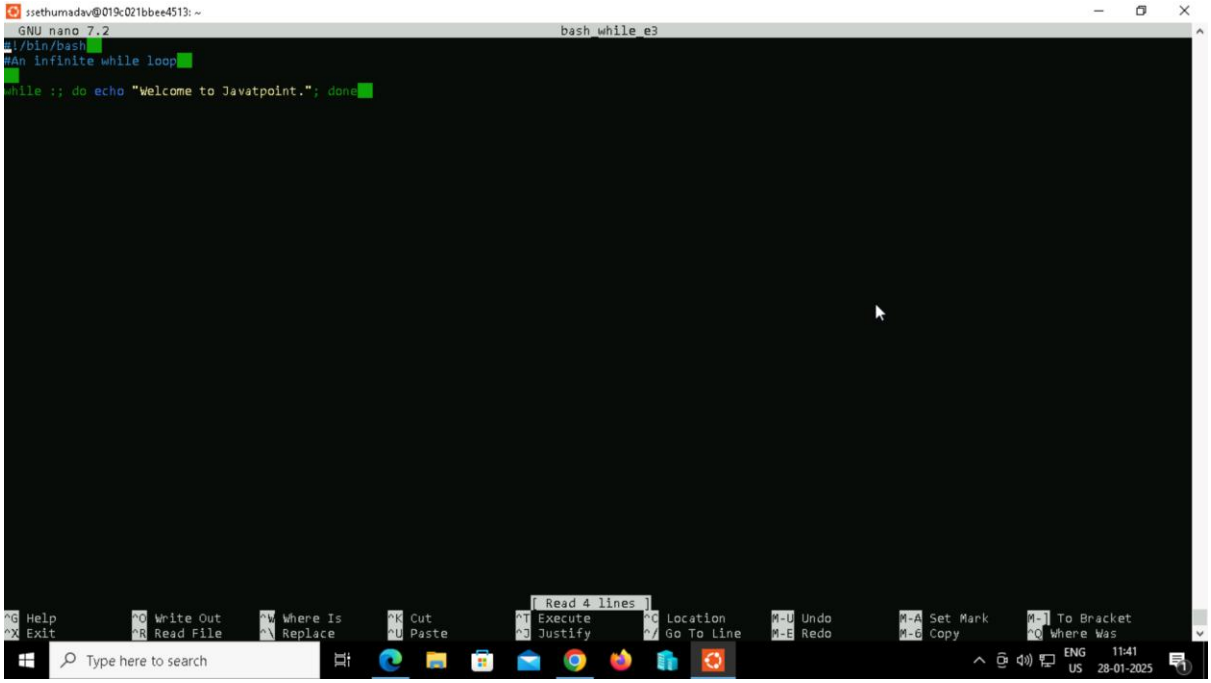


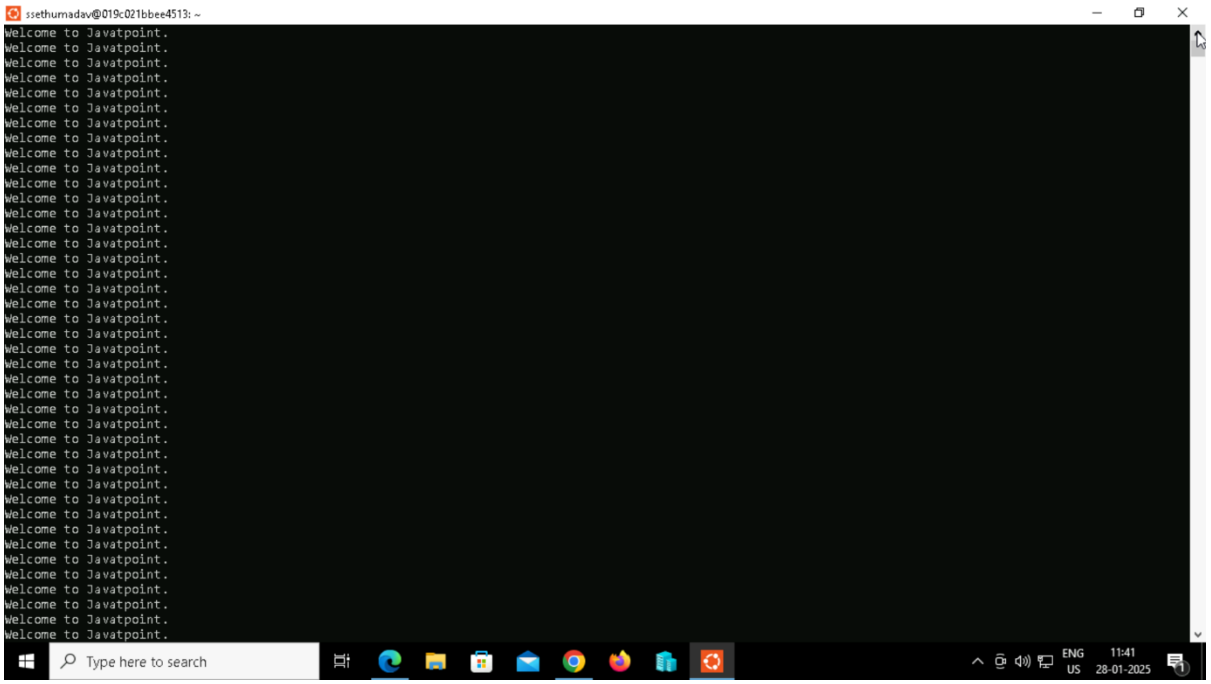
Example 2:while loop with multiple conditions:



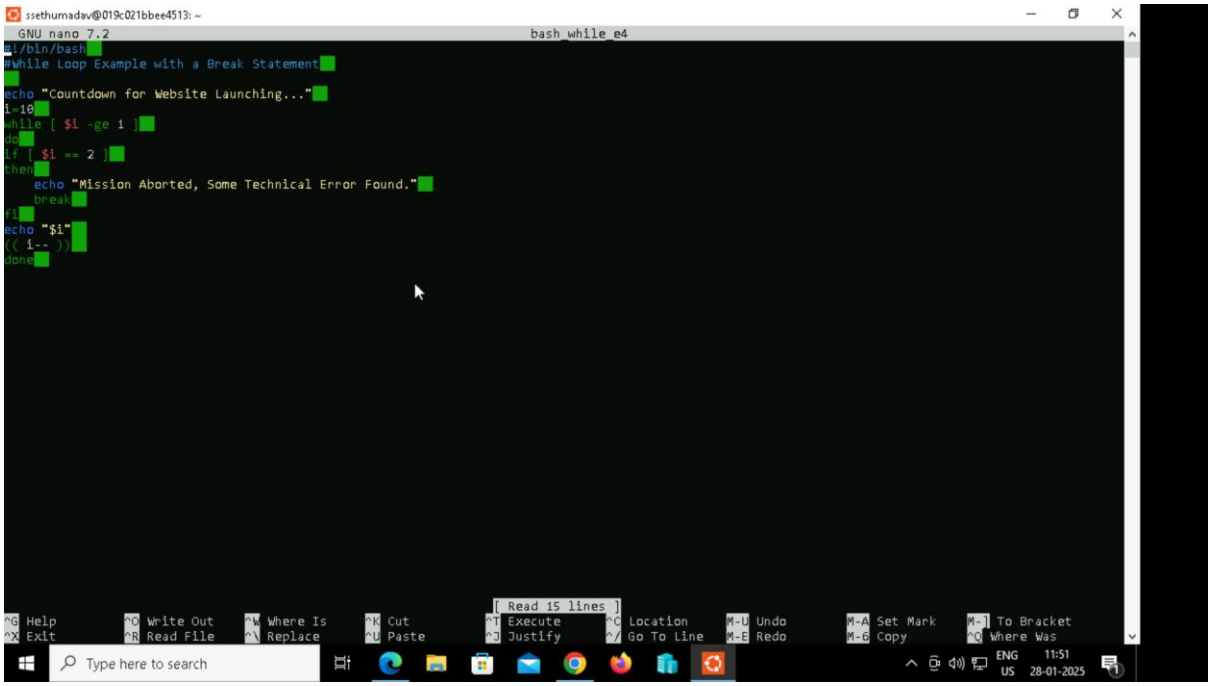


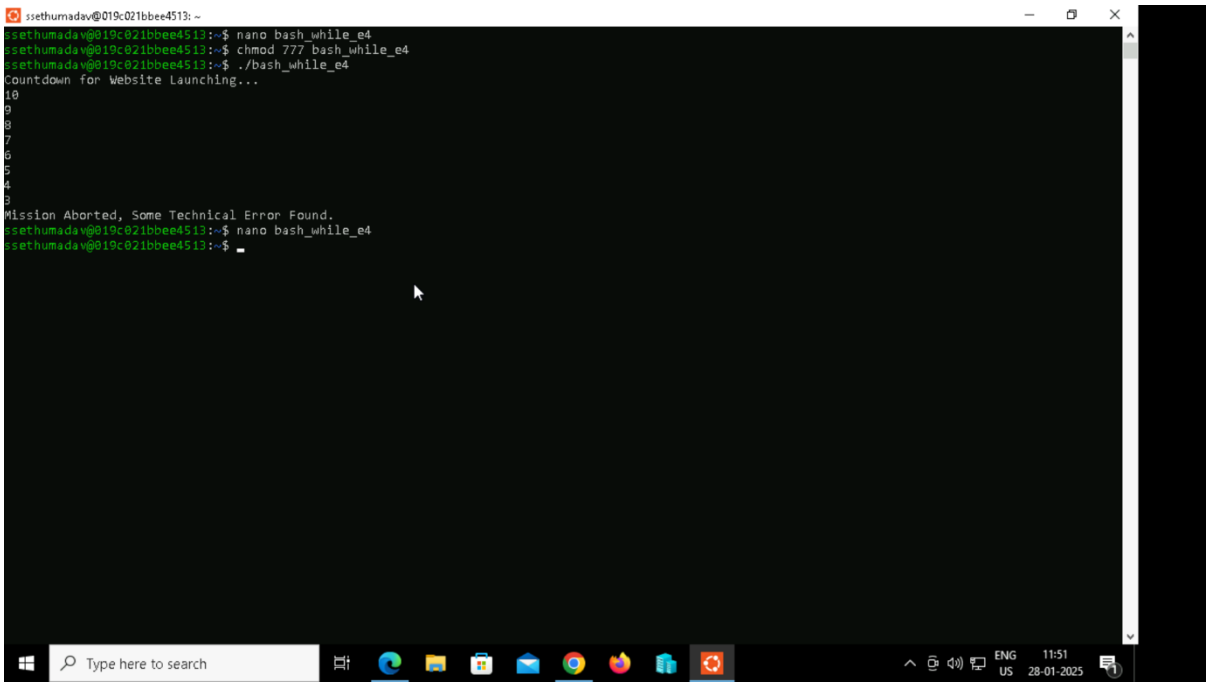
Example 3:infinite while loop



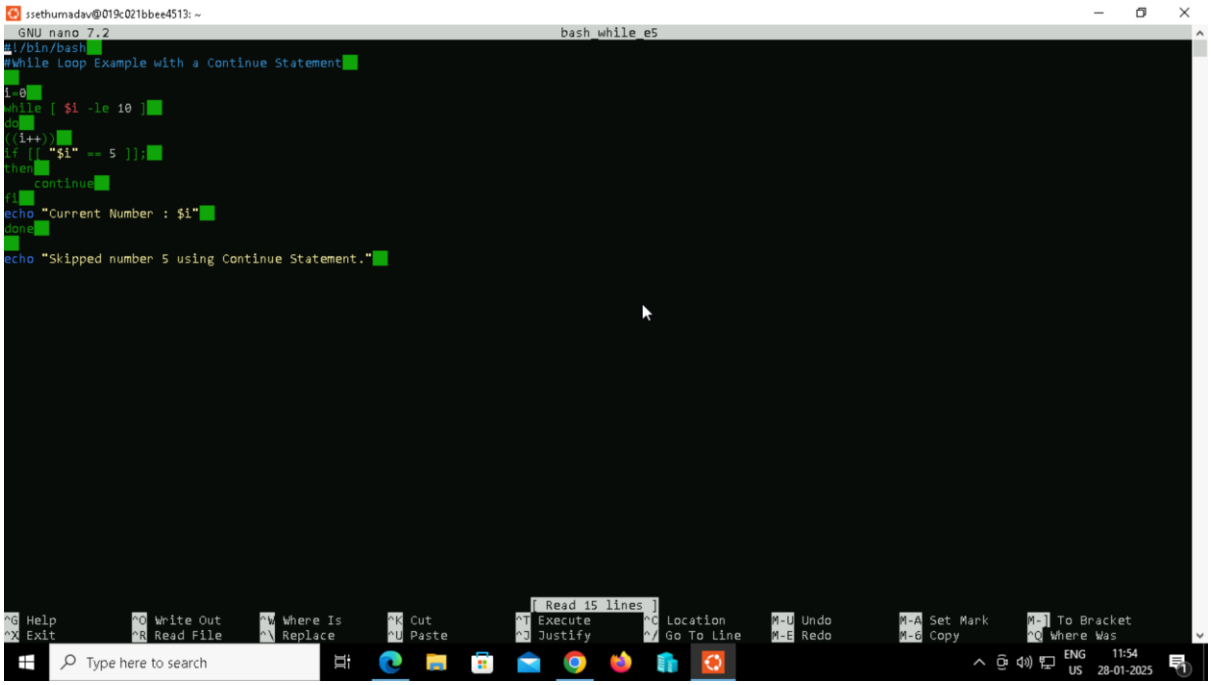


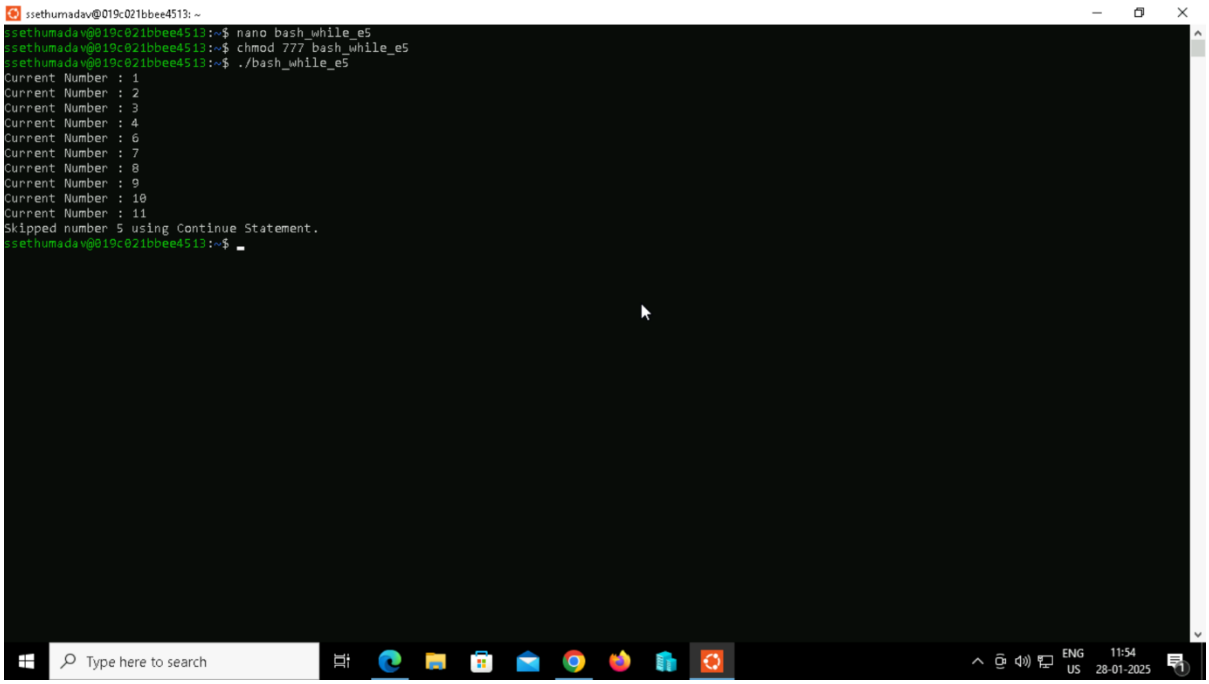
Example 4: while loop with break:



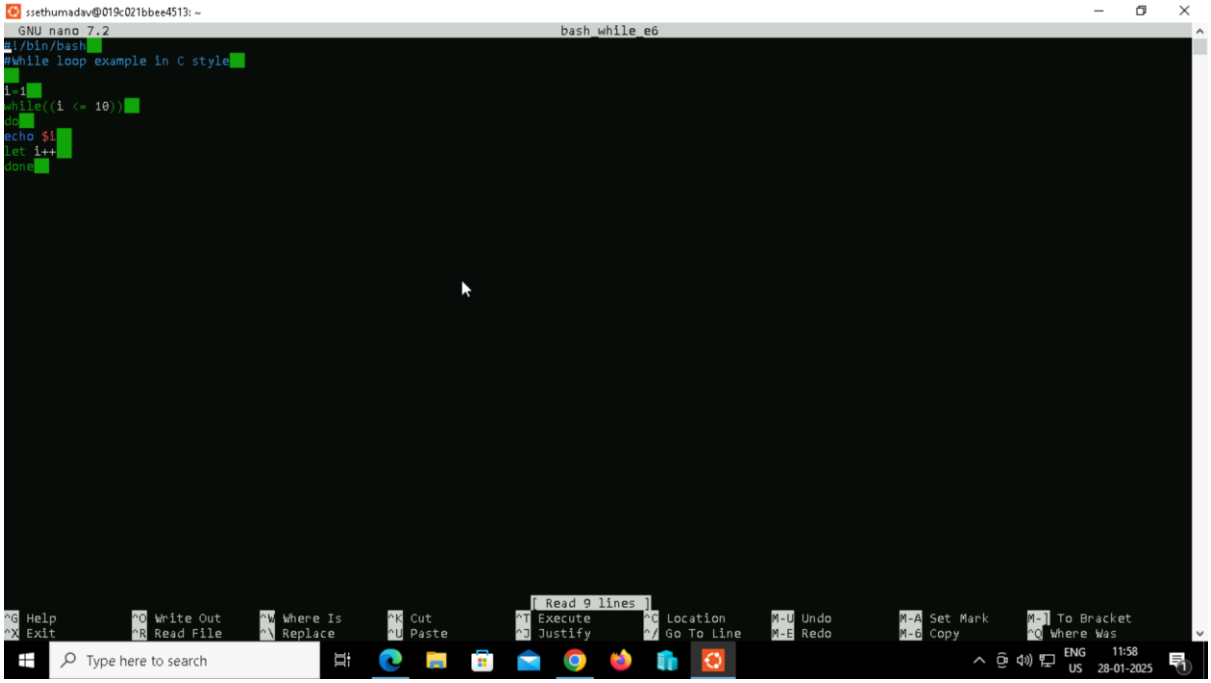


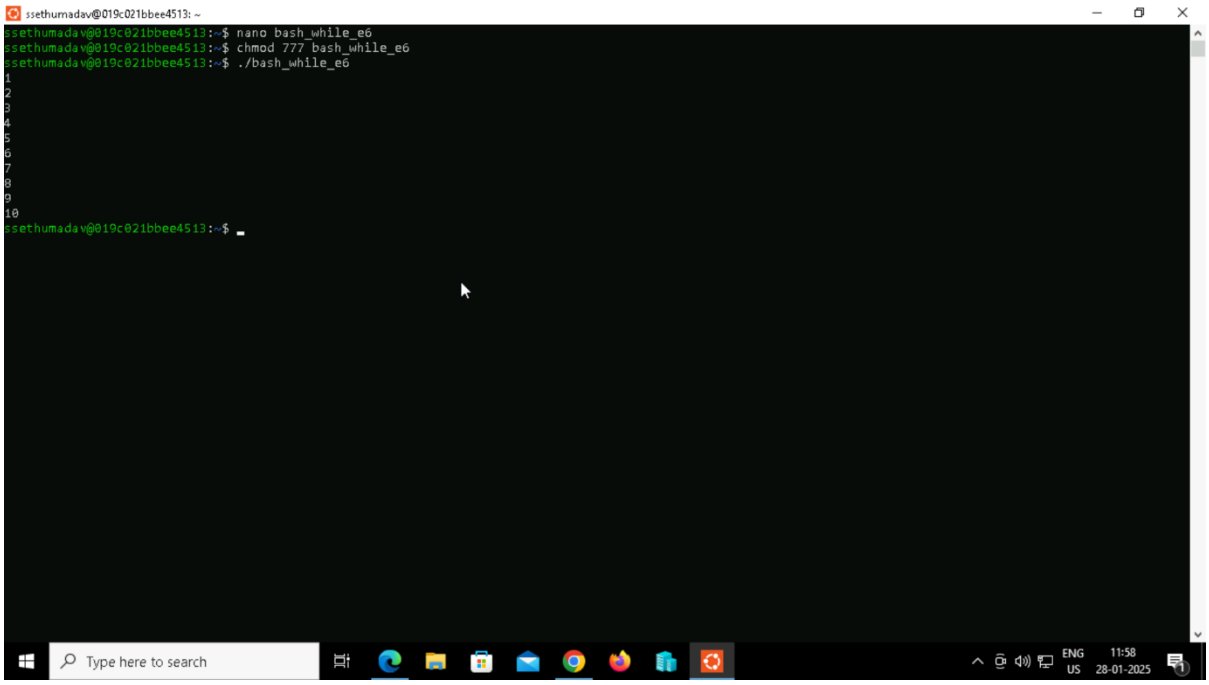
Example5:while loop with continue:





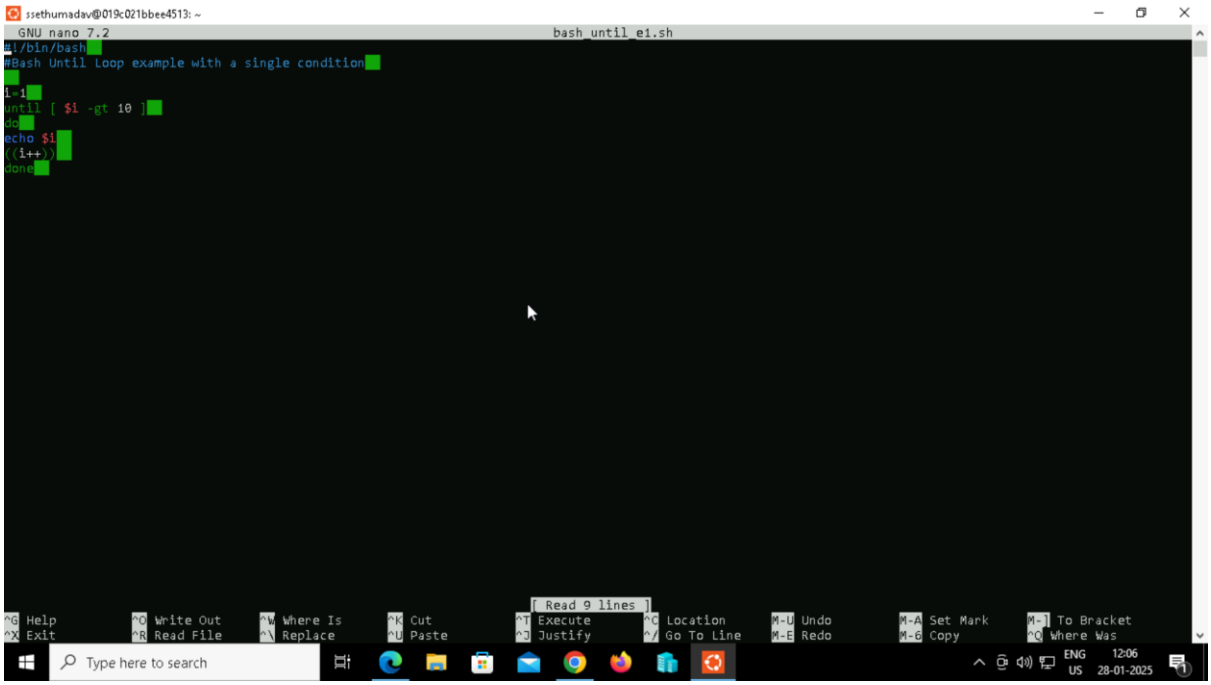
Example 6:while loop in c programming style:

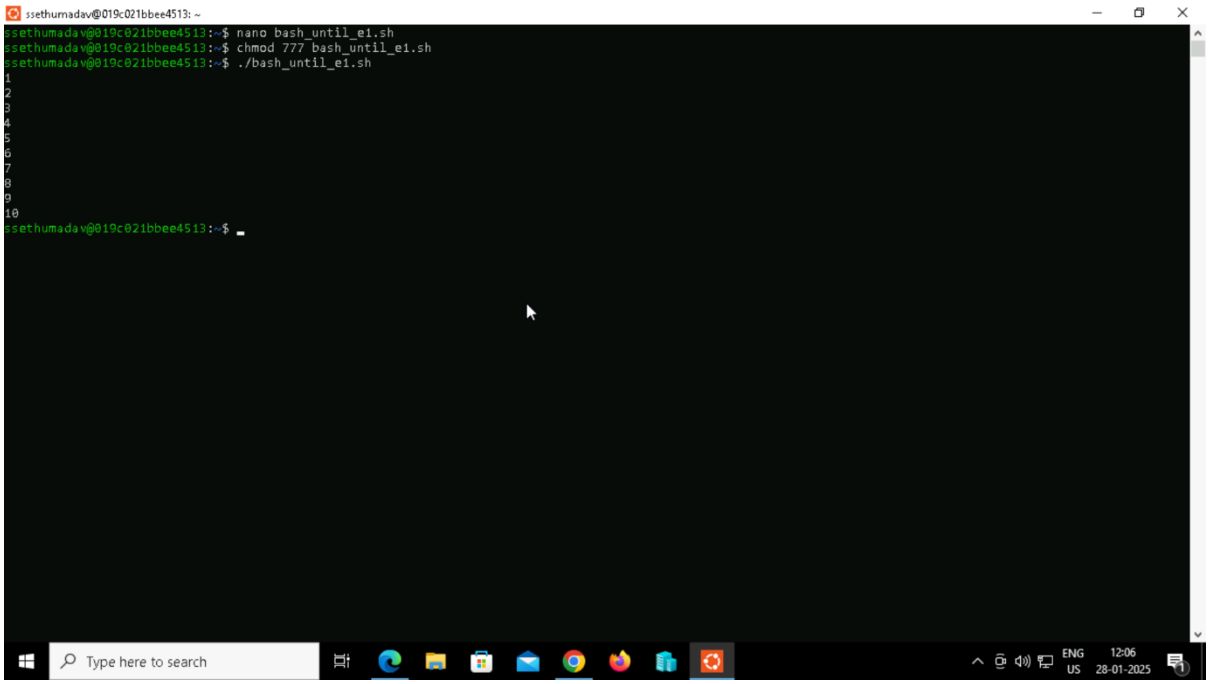




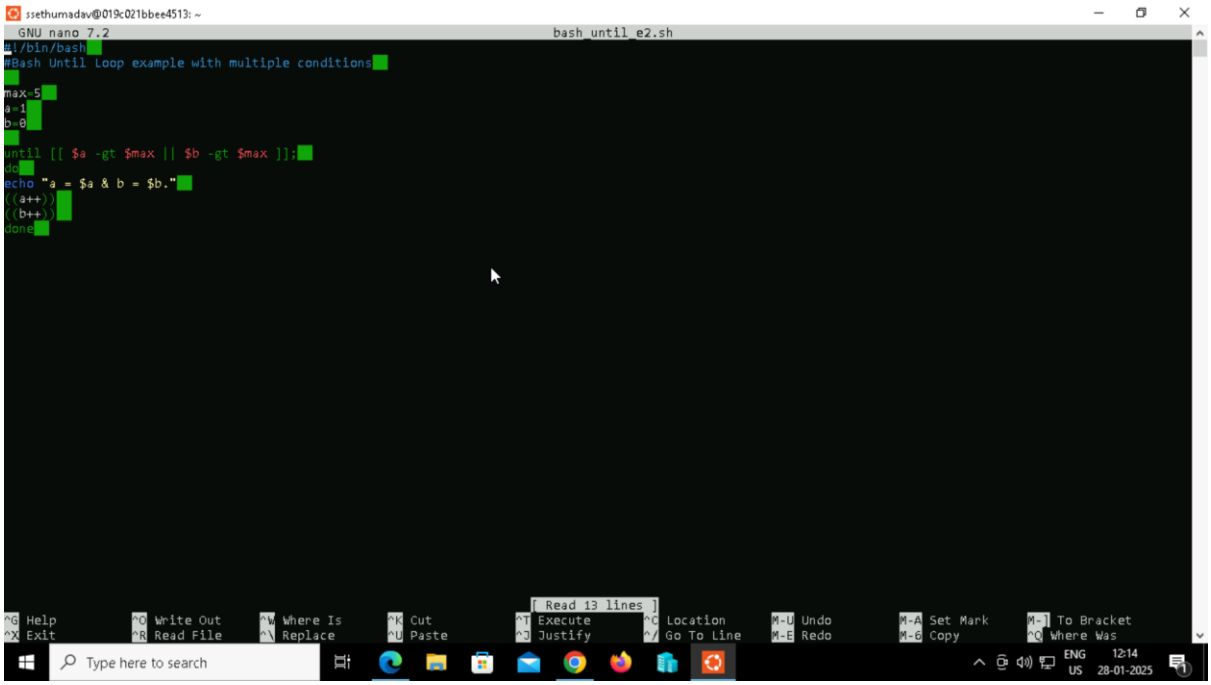
BASH UNTIL LOOP EXAMPLES:

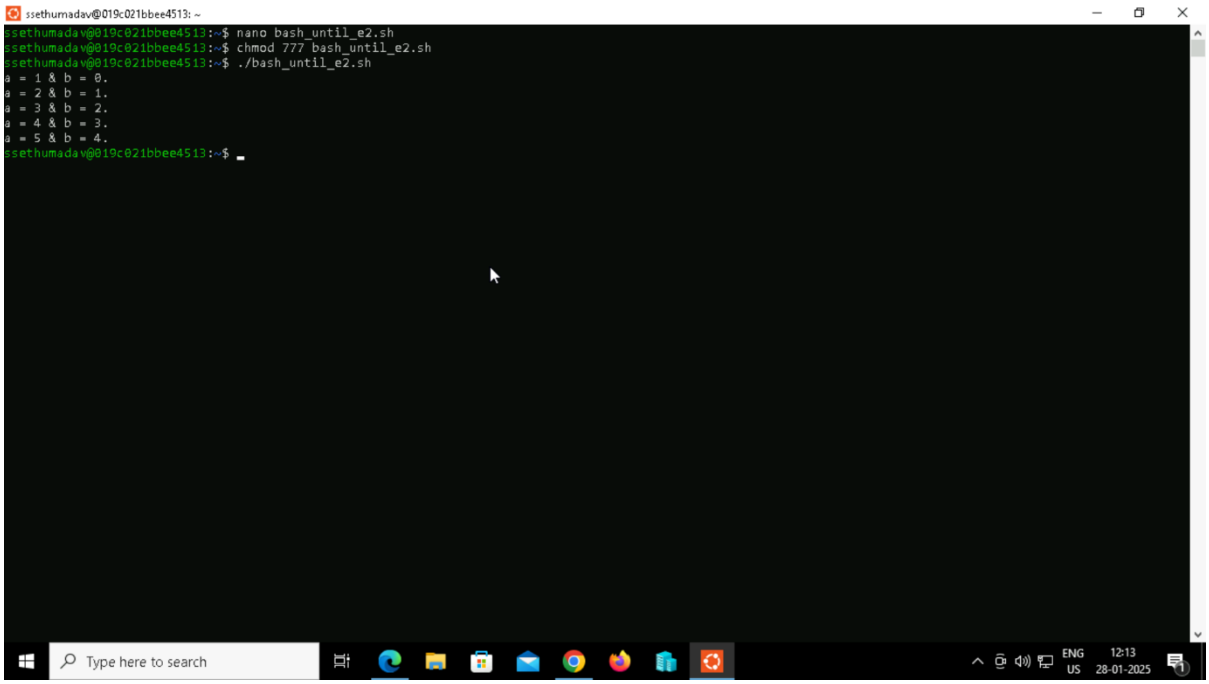
Example 1: until loop with single condition





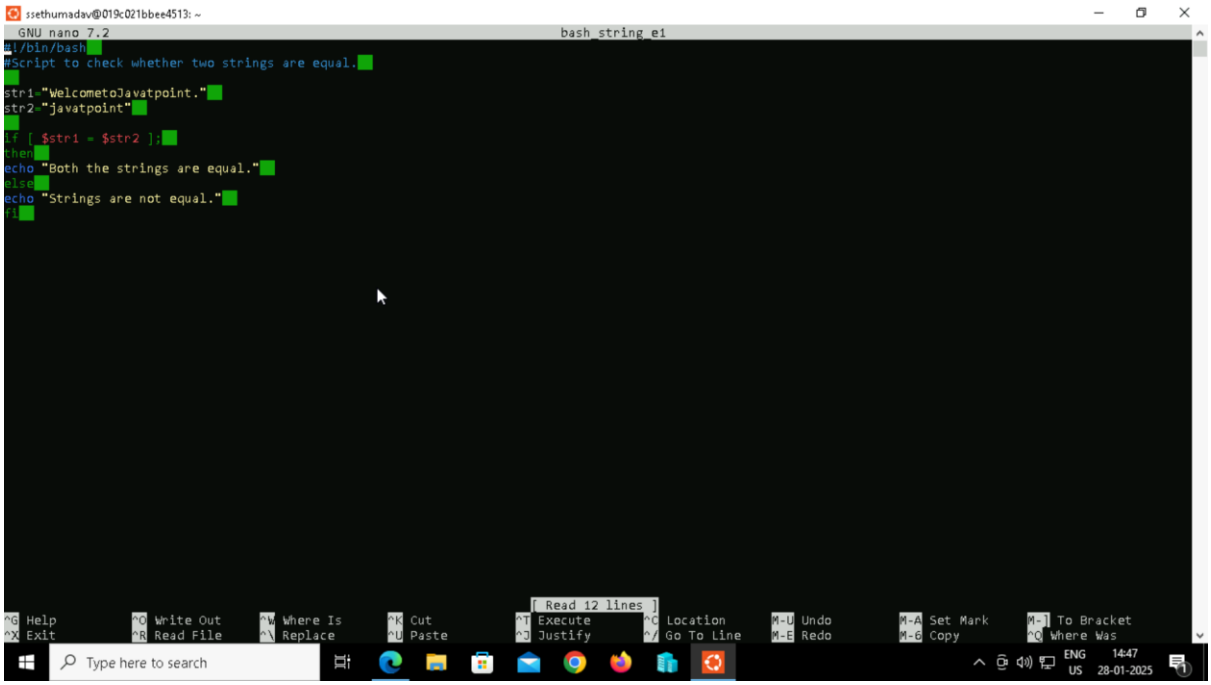
Example 2:until loop with multiple conditions

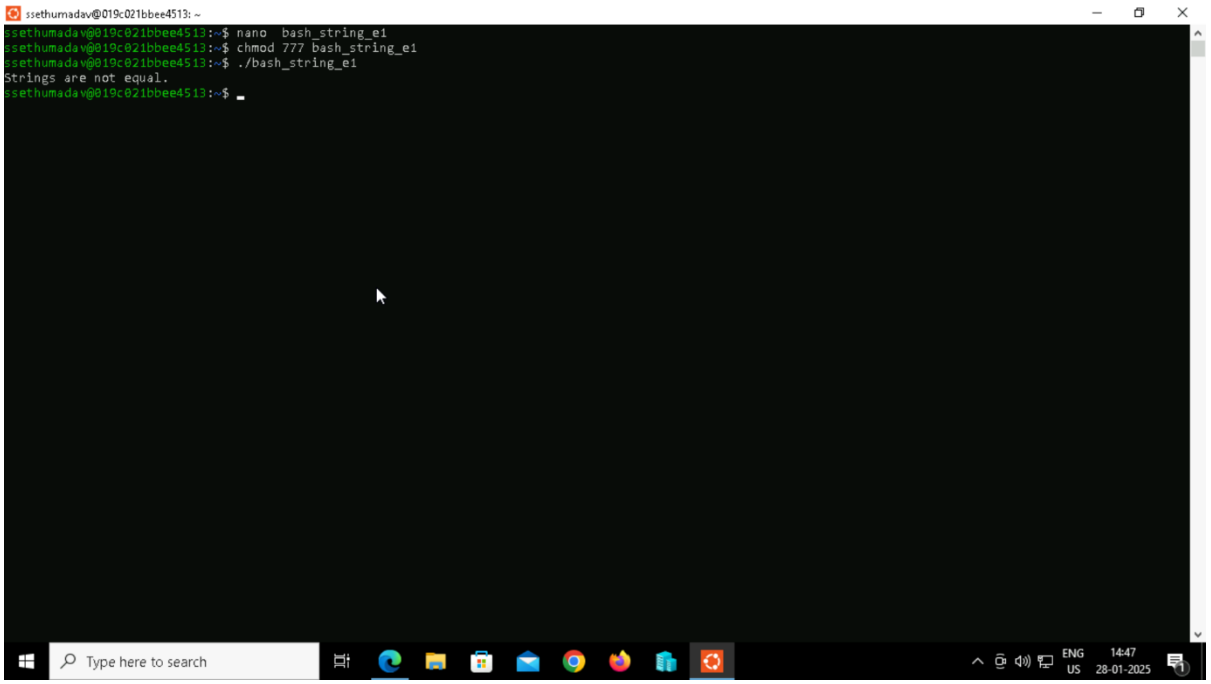




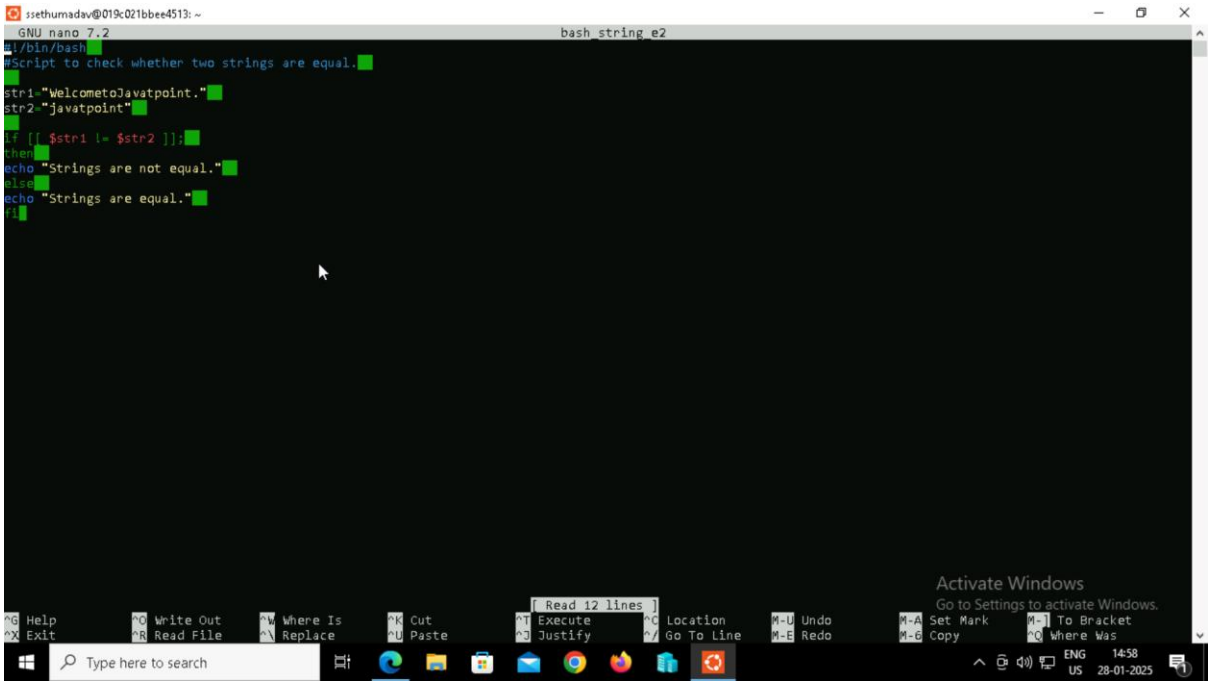
Bash String operations example:

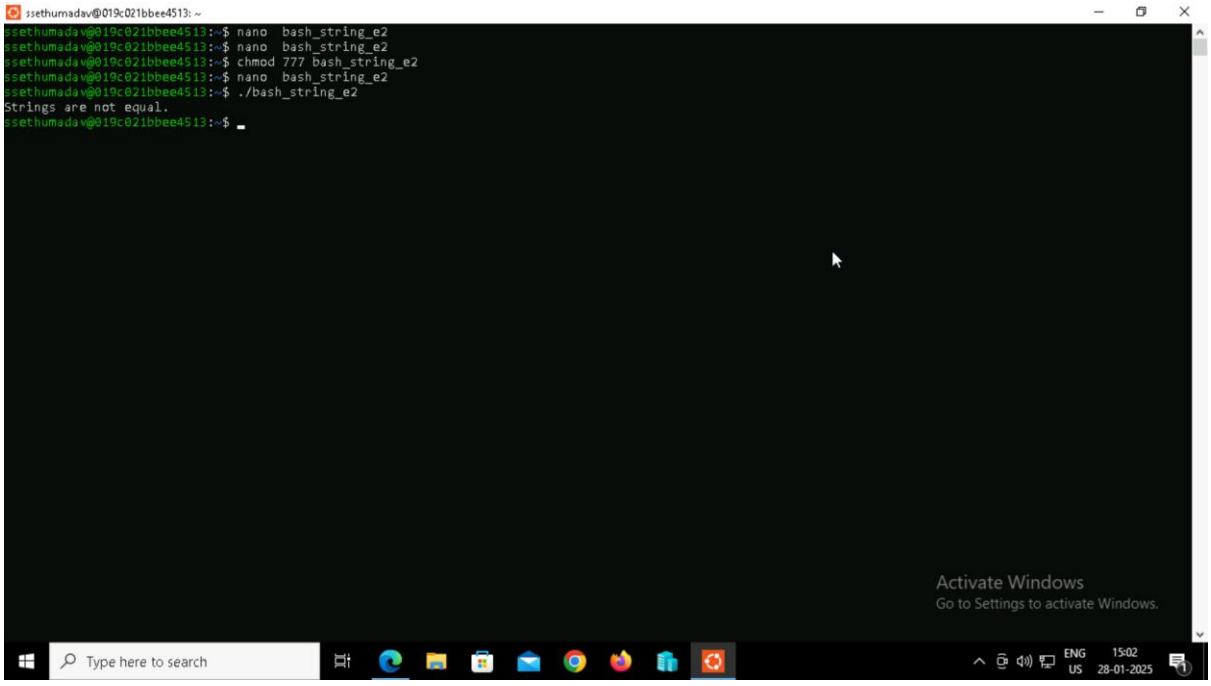
Example 1:to check both strings are equal or not



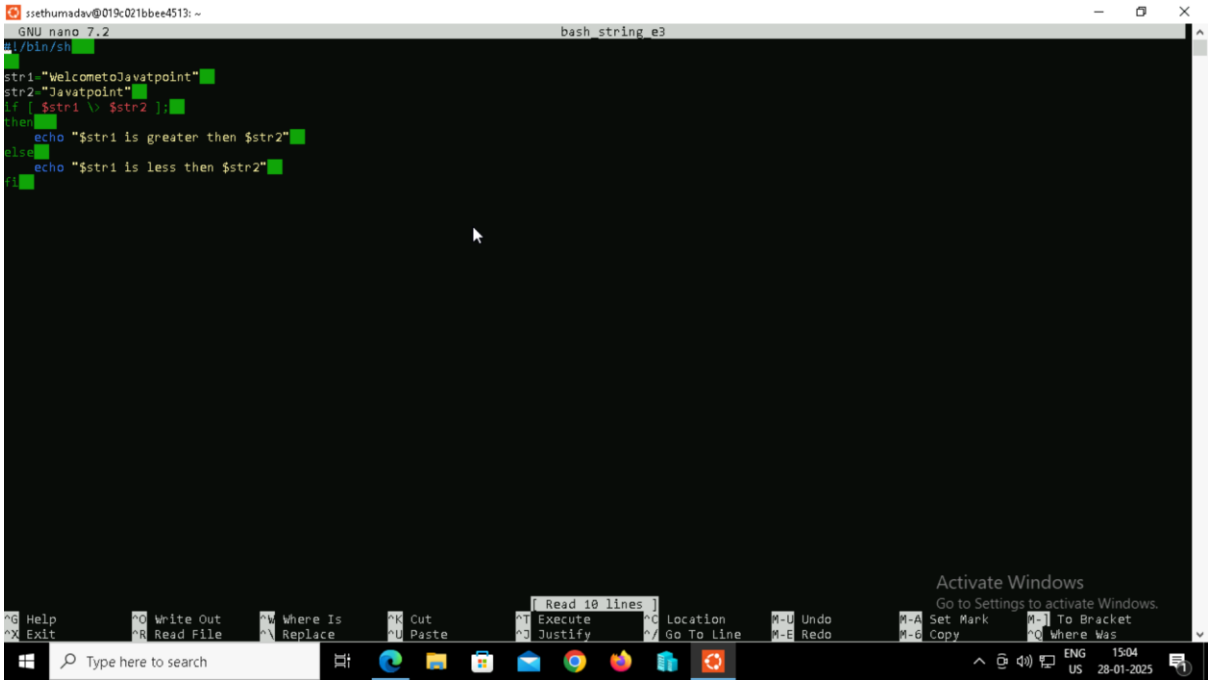


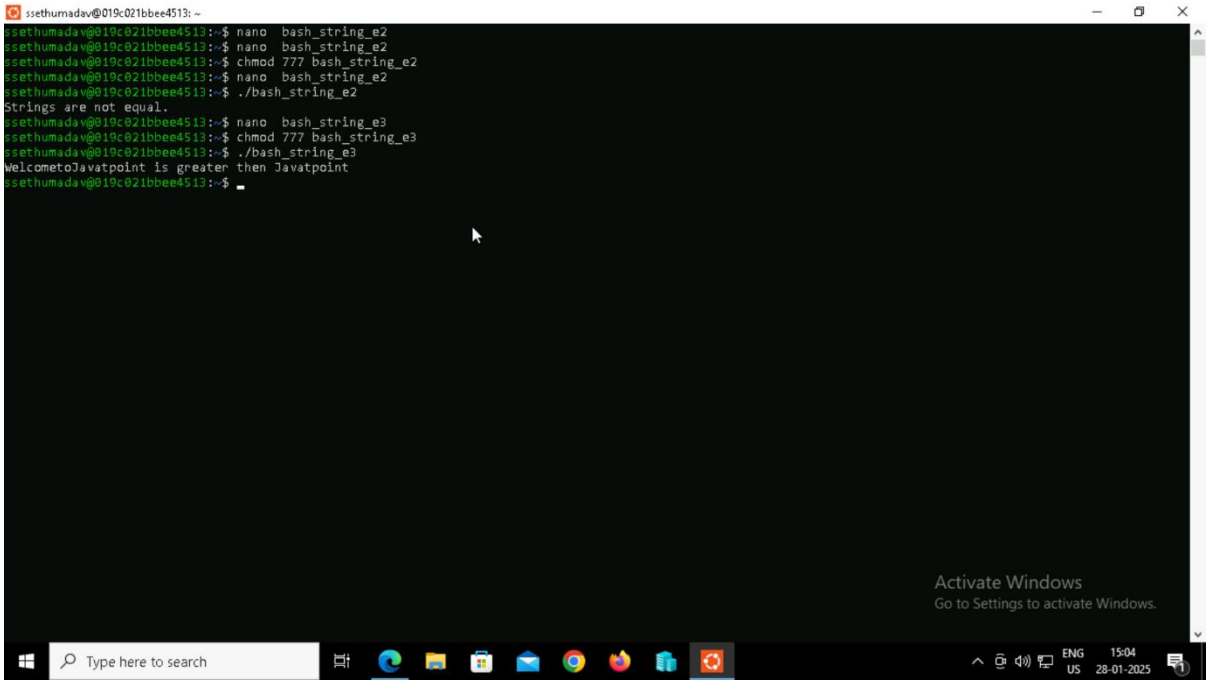
Example 2:using not operator



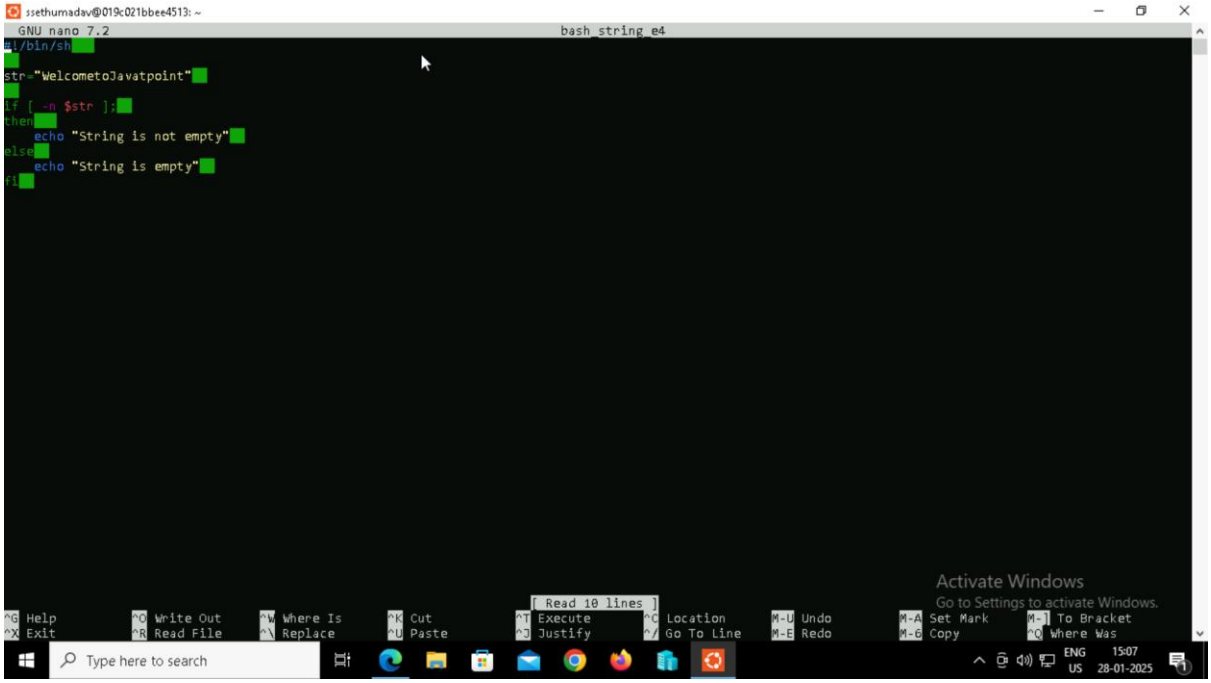


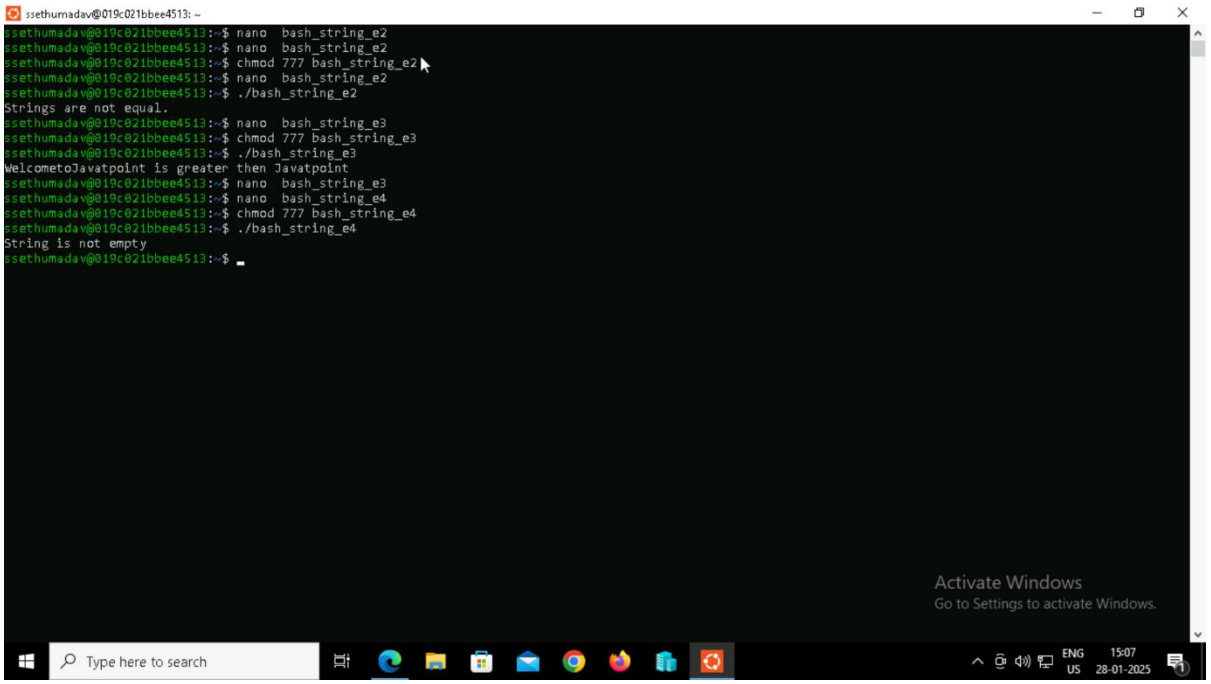
Example 3:


ssethumadav@019c021bbee4513: ~
GNU nano 7.2
bash_string_e3
#!/bin/sh
str1="WelcometoJavatpoint"
str2="Javatpoint"
if [$str1 \> $str2];
then
echo "$str1 is greater then $str2"
else
echo "$str1 is less then $str2"
fi
[Read 10 lines]
^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo M-A Set Mark M-] To Bracket
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo M-6 Copy ^Q Where Was
Activate Windows
Go to Settings to activate Windows.
Type here to search
ENG US 15:04 28-01-2025


ssethumadav@019c021bbee4513: ~
ssethumadav@019c021bbee4513:~$ nano bash_string_e2
ssethumadav@019c021bbee4513:~$ nano bash_string_e2
ssethumadav@019c021bbee4513:~$ chmod 777 bash_string_e2
ssethumadav@019c021bbee4513:~$ nano bash_string_e2
ssethumadav@019c021bbee4513:~$ ./bash_string_e2
Strings are not equal.
ssethumadav@019c021bbee4513:~$ nano bash_string_e3
ssethumadav@019c021bbee4513:~$ chmod 777 bash_string_e3
ssethumadav@019c021bbee4513:~$ ./bash_string_e3
WelcometoJavatpoint is greater then Javatpoint
ssethumadav@019c021bbee4513:~$
Activate Windows
Go to Settings to activate Windows.
Type here to search
ENG US 15:04 28-01-2025

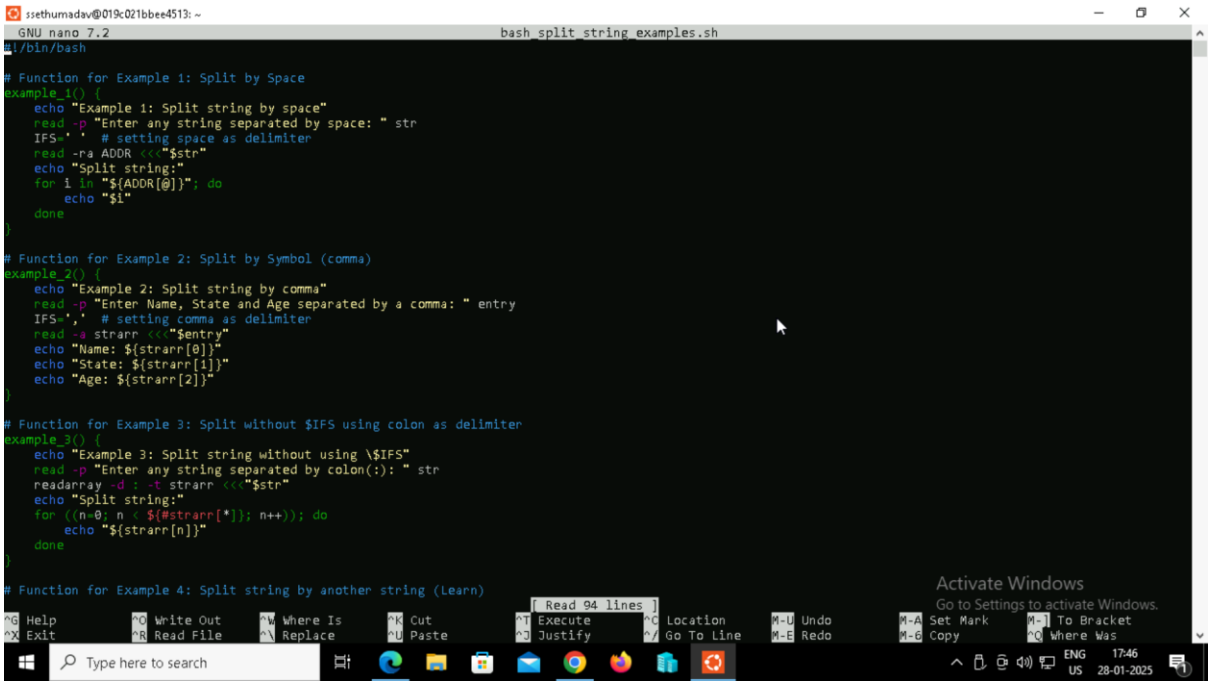
Example4:string empty or not

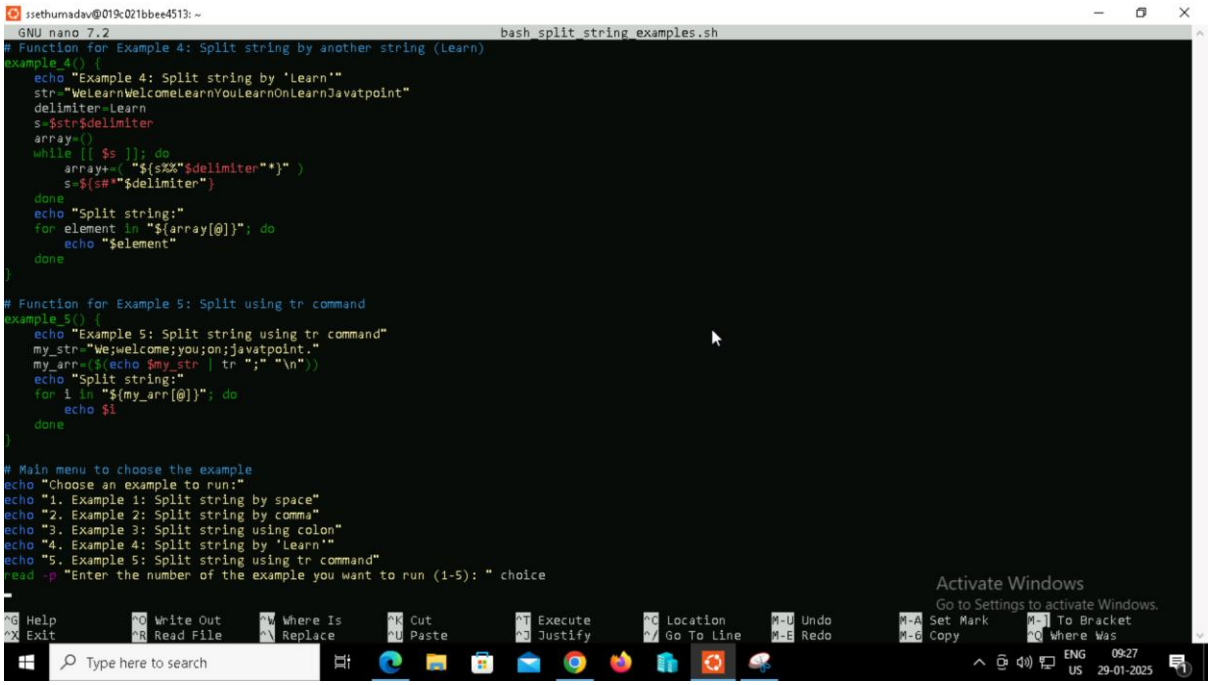




Bash split string examples:

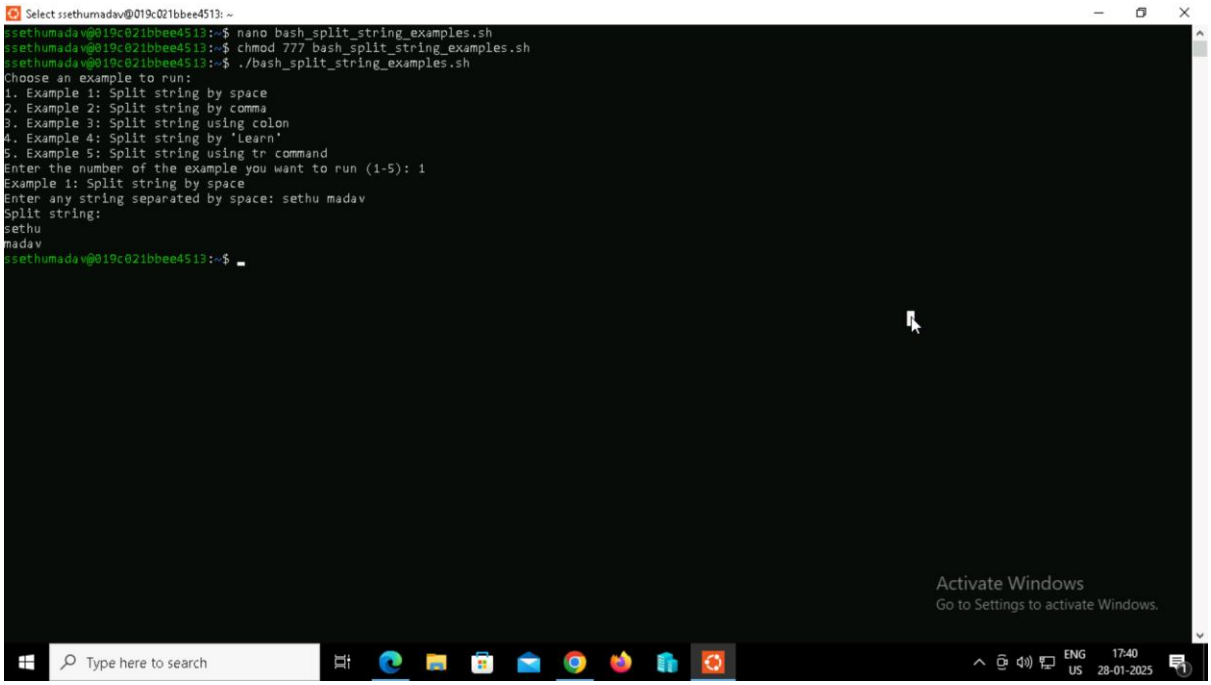
Code: example 1 to 5



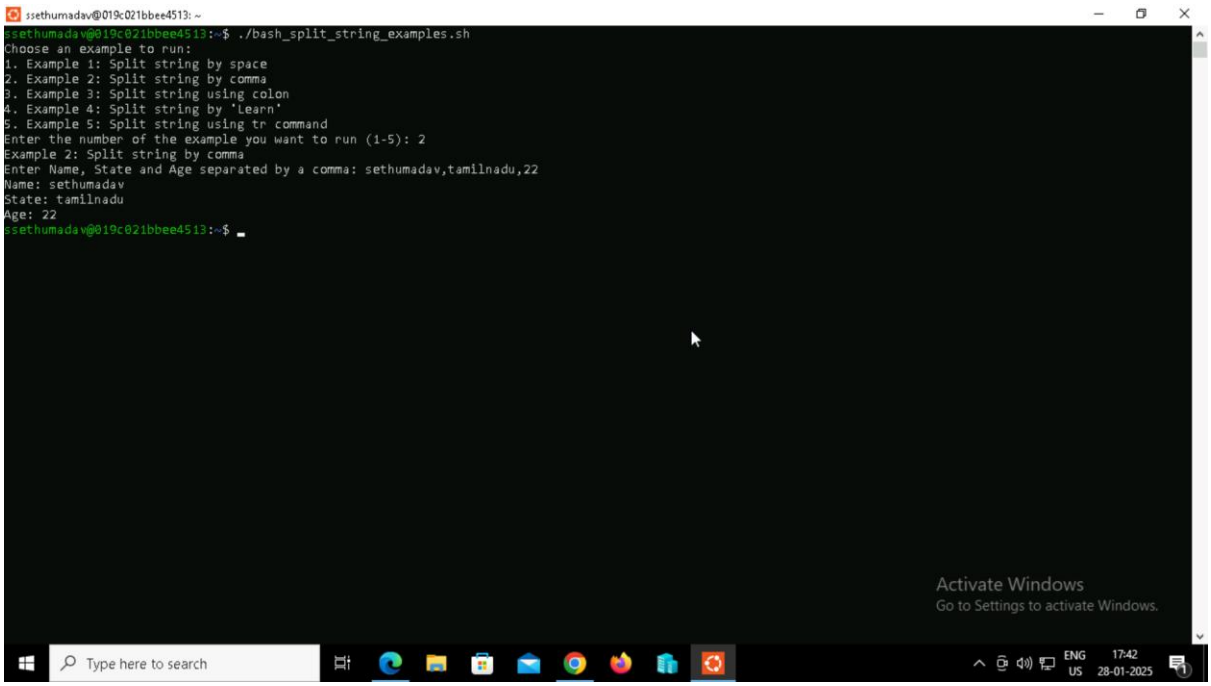


Outputs for example 1 to 5:

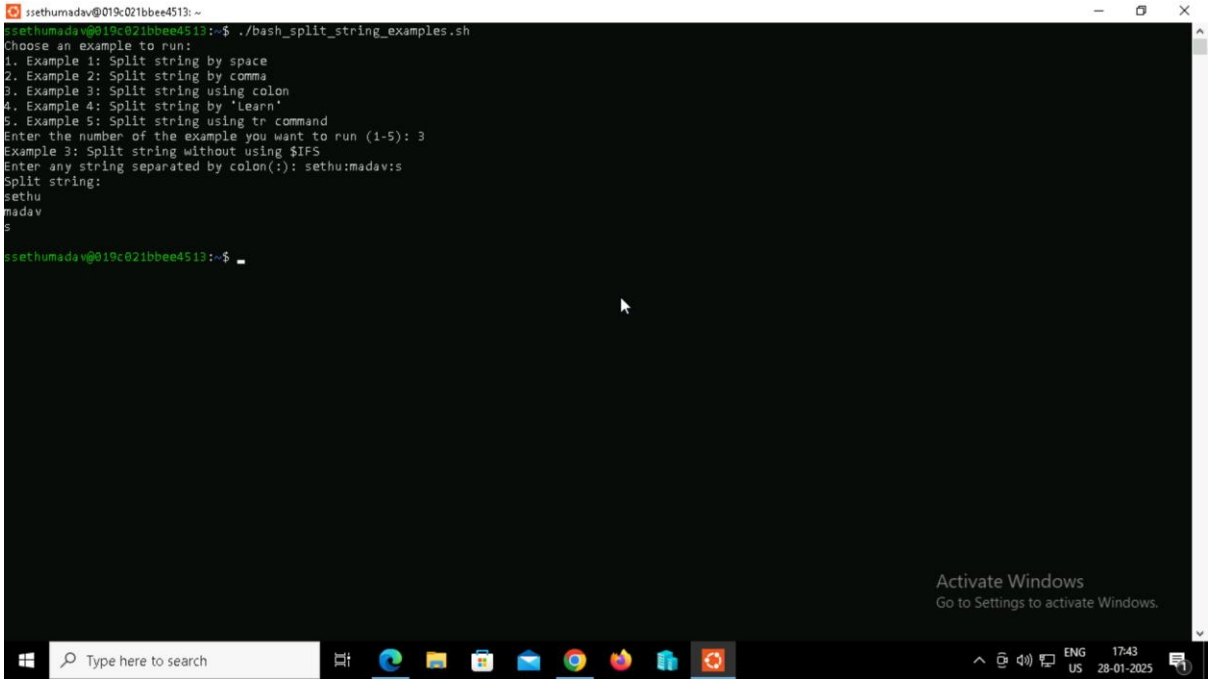
1.split string by space:



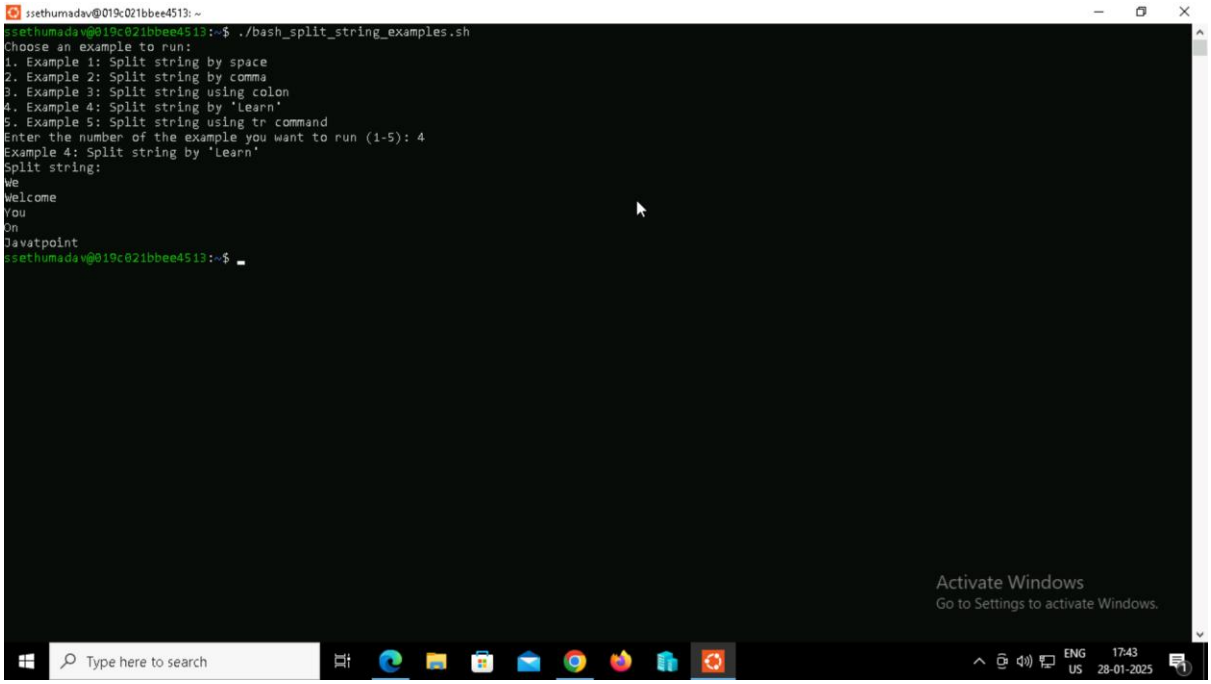
2. split string by comma



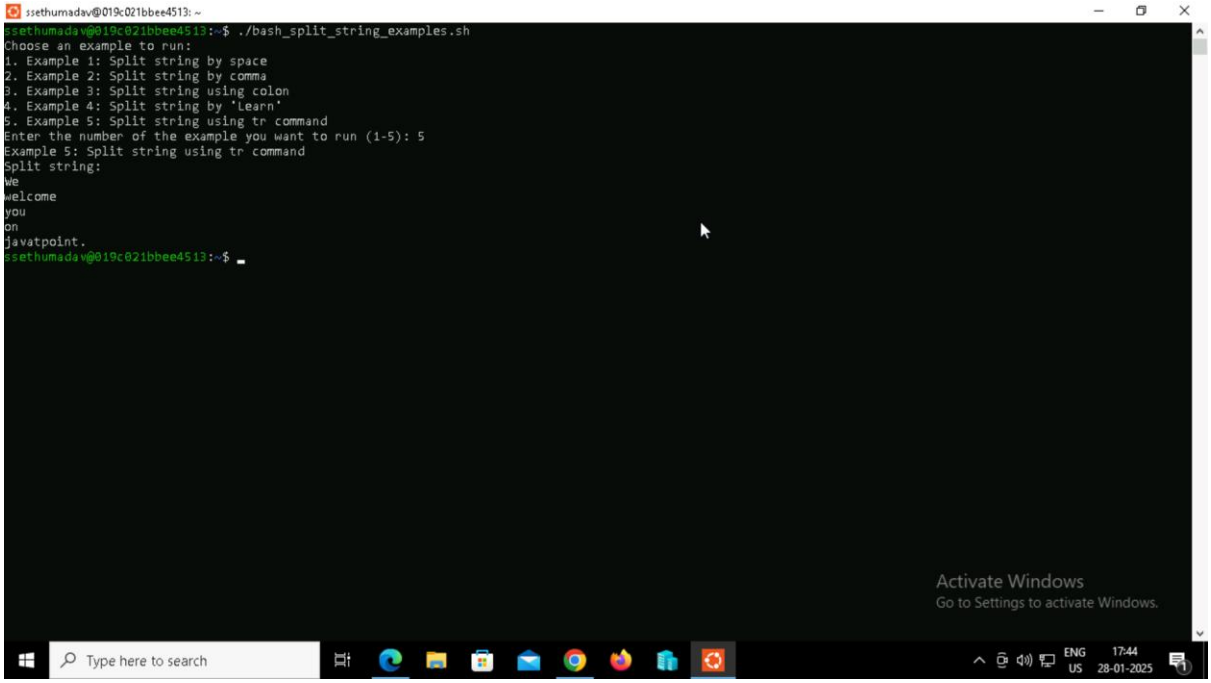
3. split string using colon



4. split string by ‘learn’

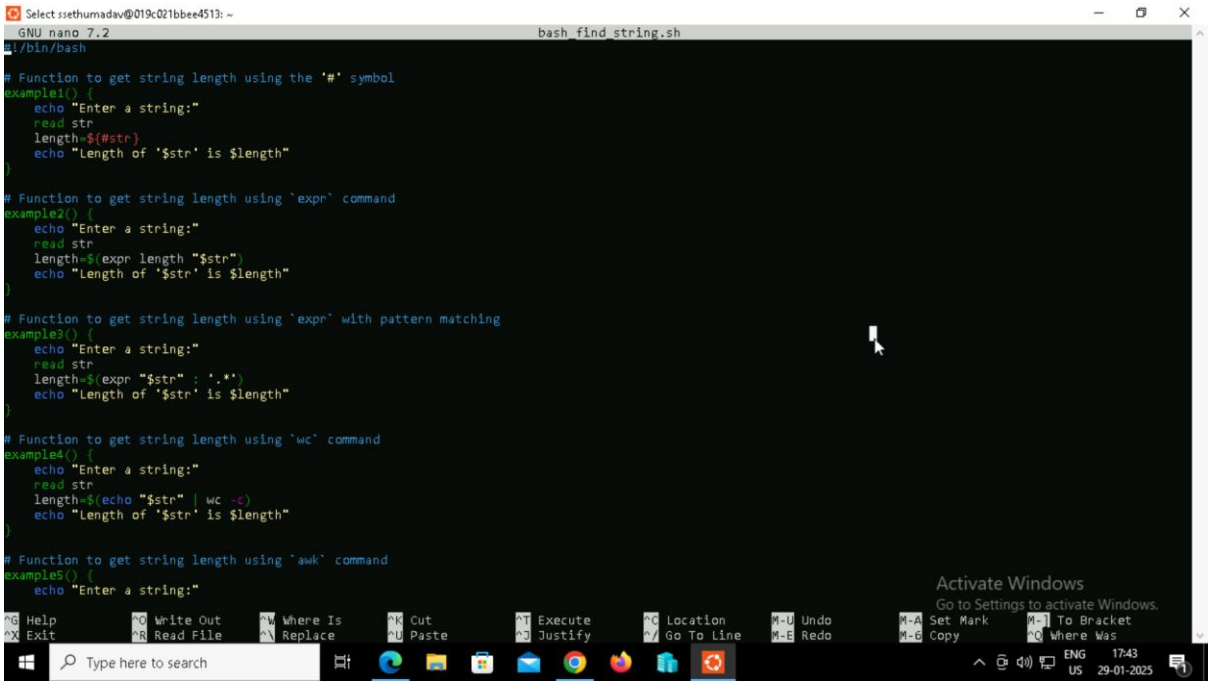


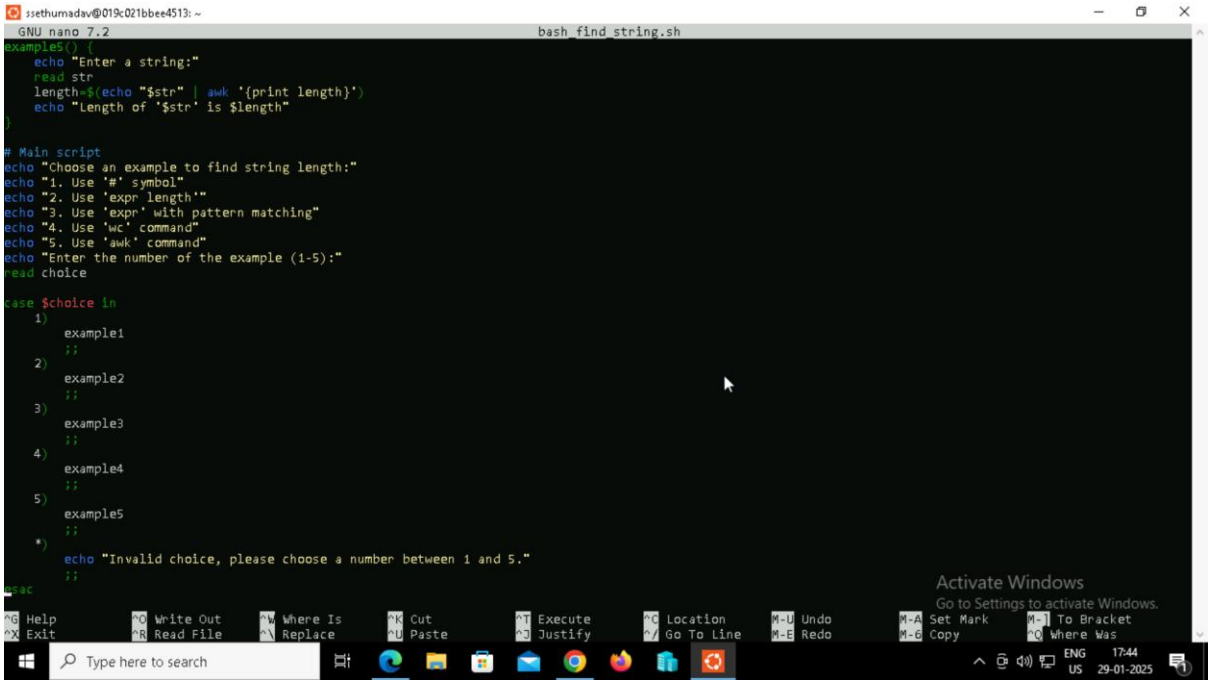
5. split string using tr command



BASH FIND STRING EXAMPLES:

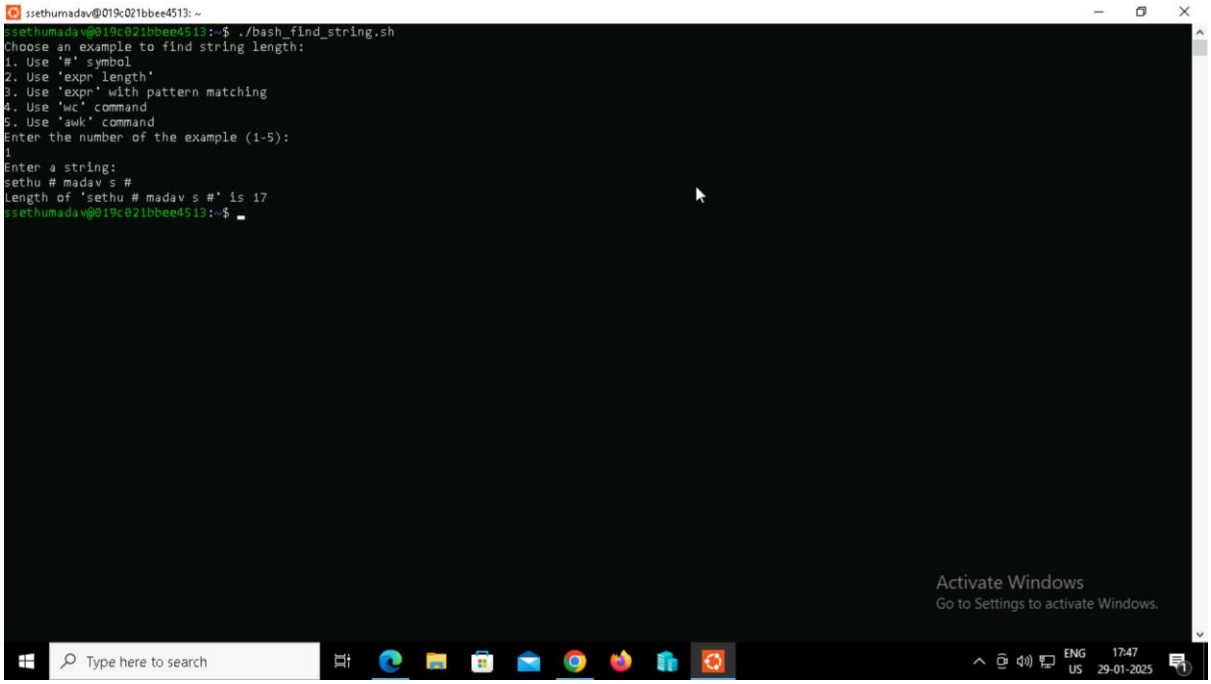
Code for example 1 to 5:



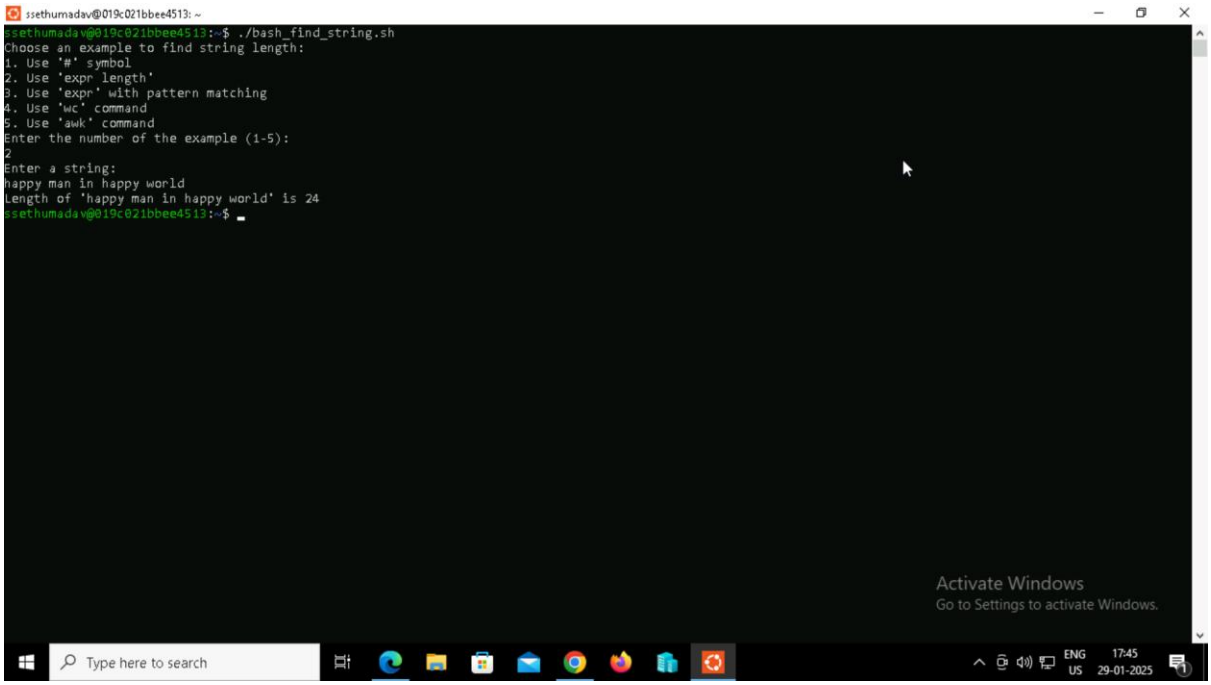


Outputs :

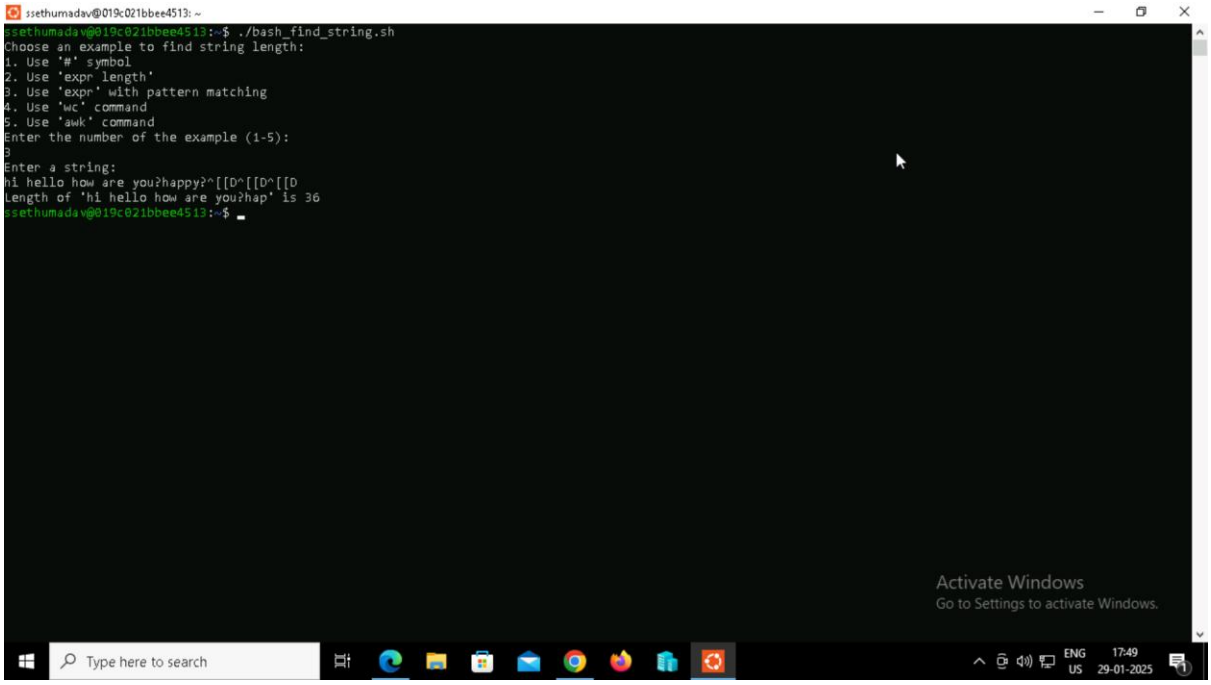
Example 1: using # symbol



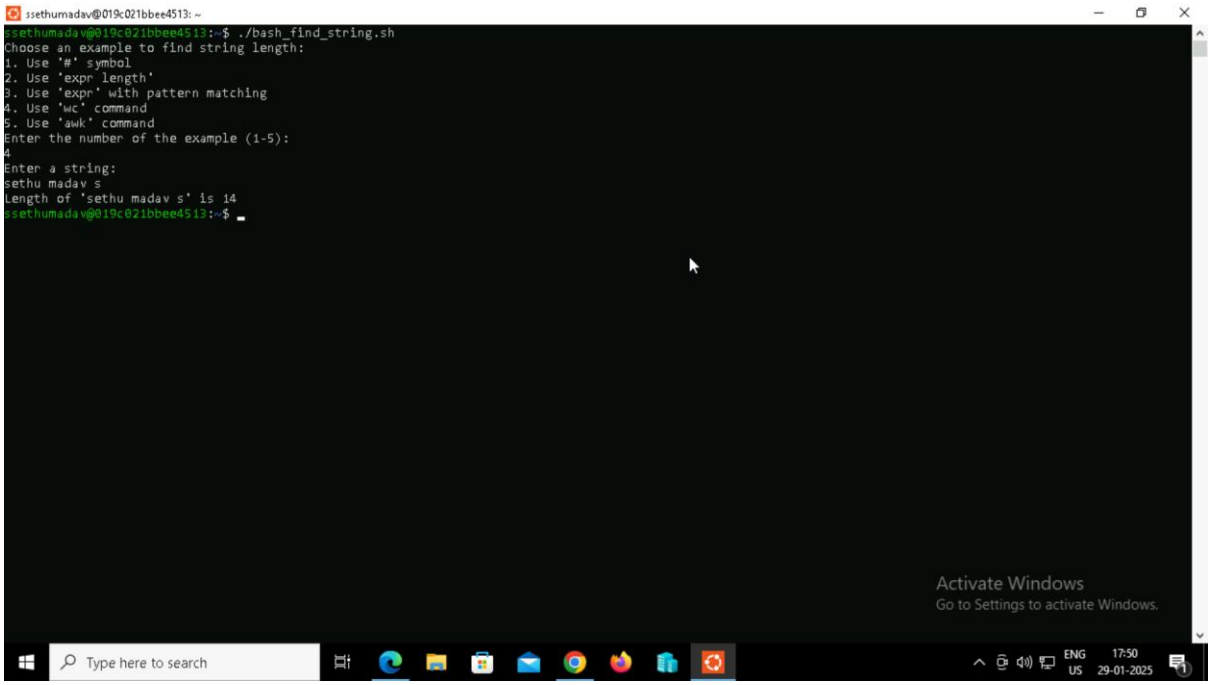
Example 2: using expr length



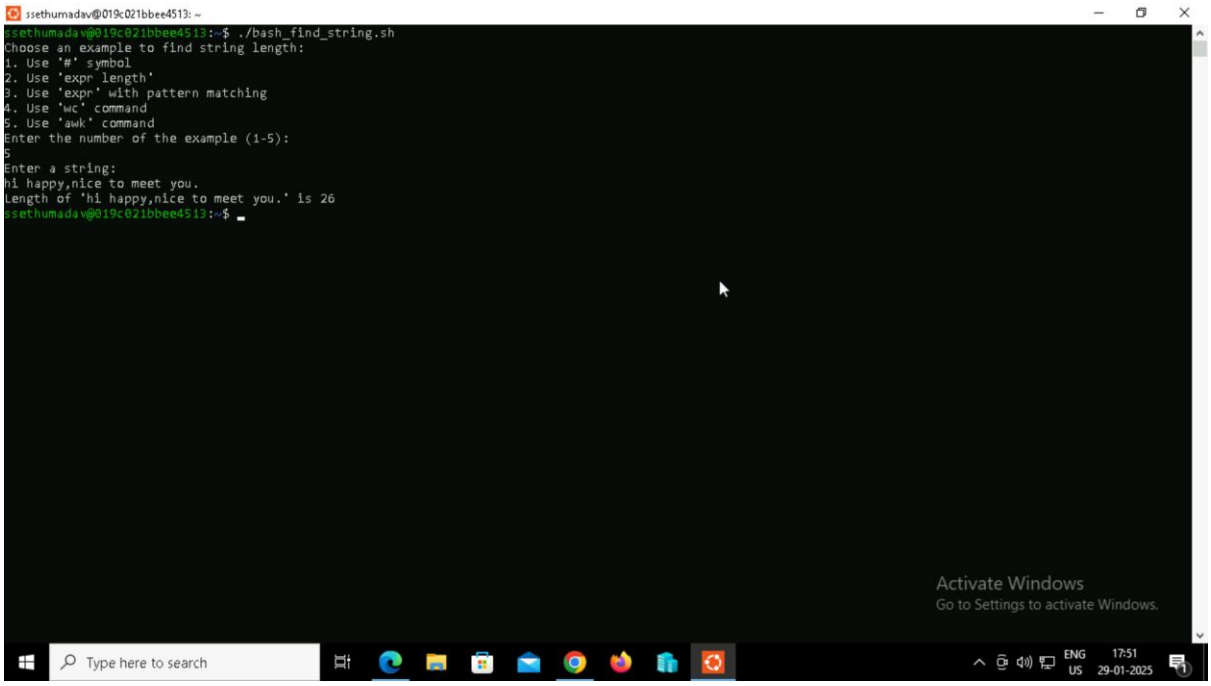
Example 3:using expr with pattern



Example 4: using wc command

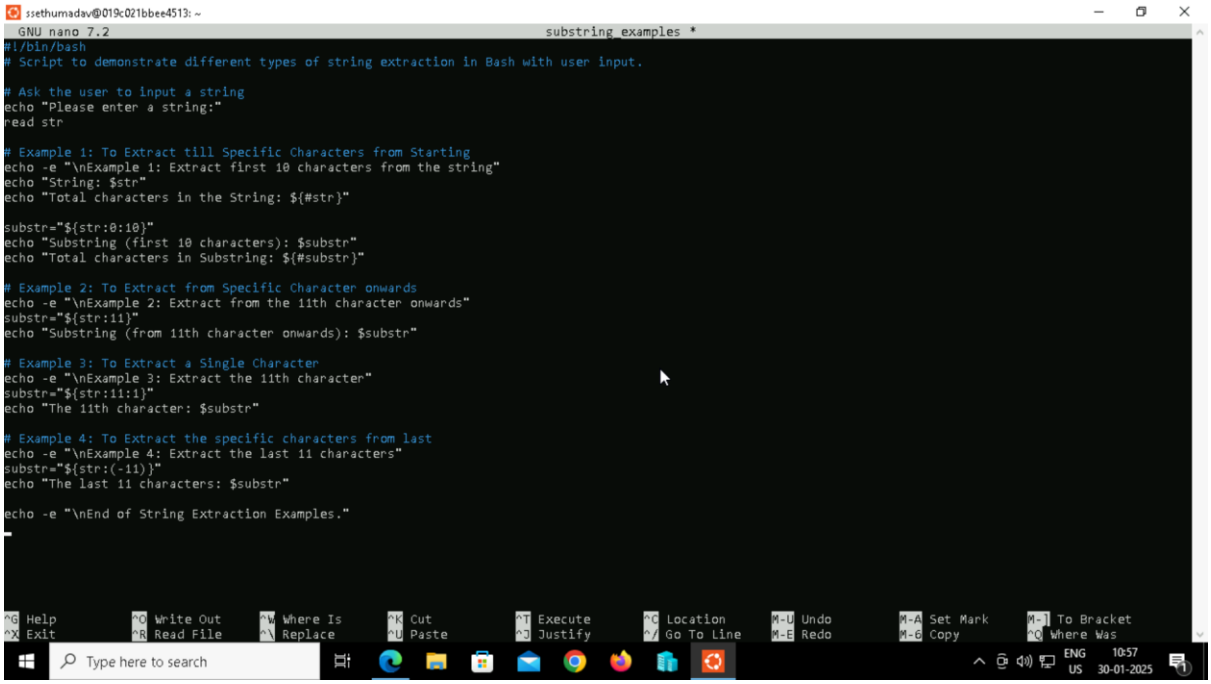


Example 5: using awk command

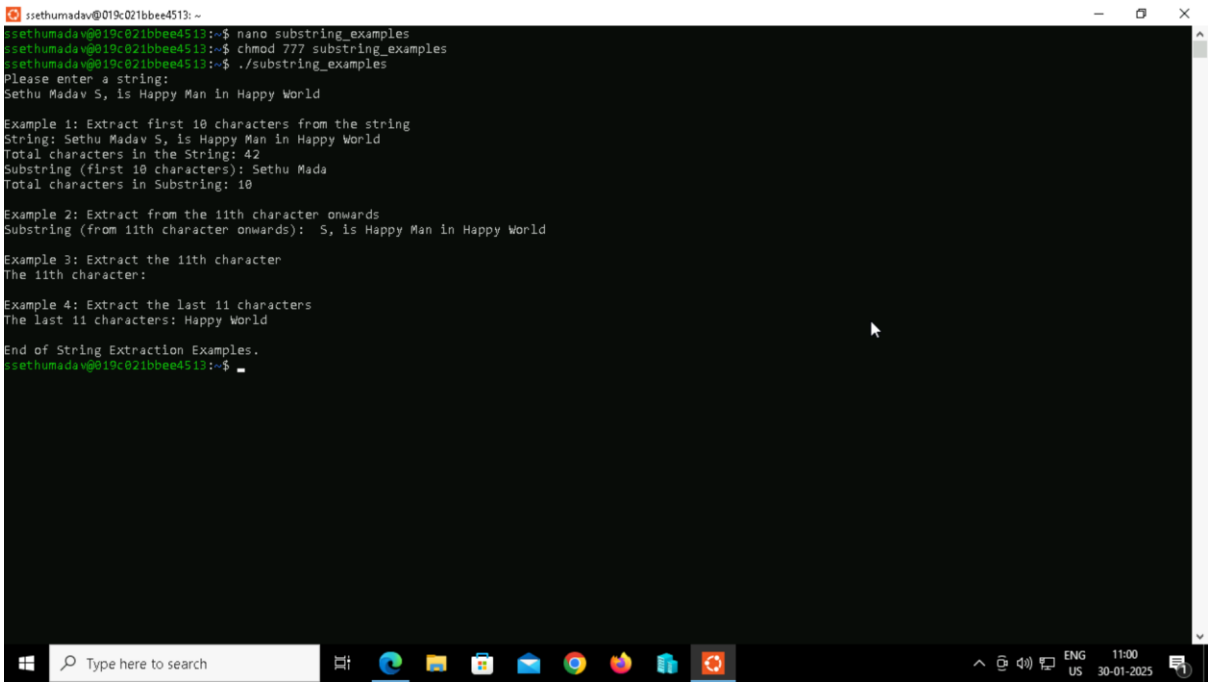


Bash Substring examples:

code for examples 1 to 4:



Output:



Bash Concatenate String:

Example 1: Write Variables Side by Side

Example 2: Using Double Quotes

Example 3: Using Append Operator with Loop

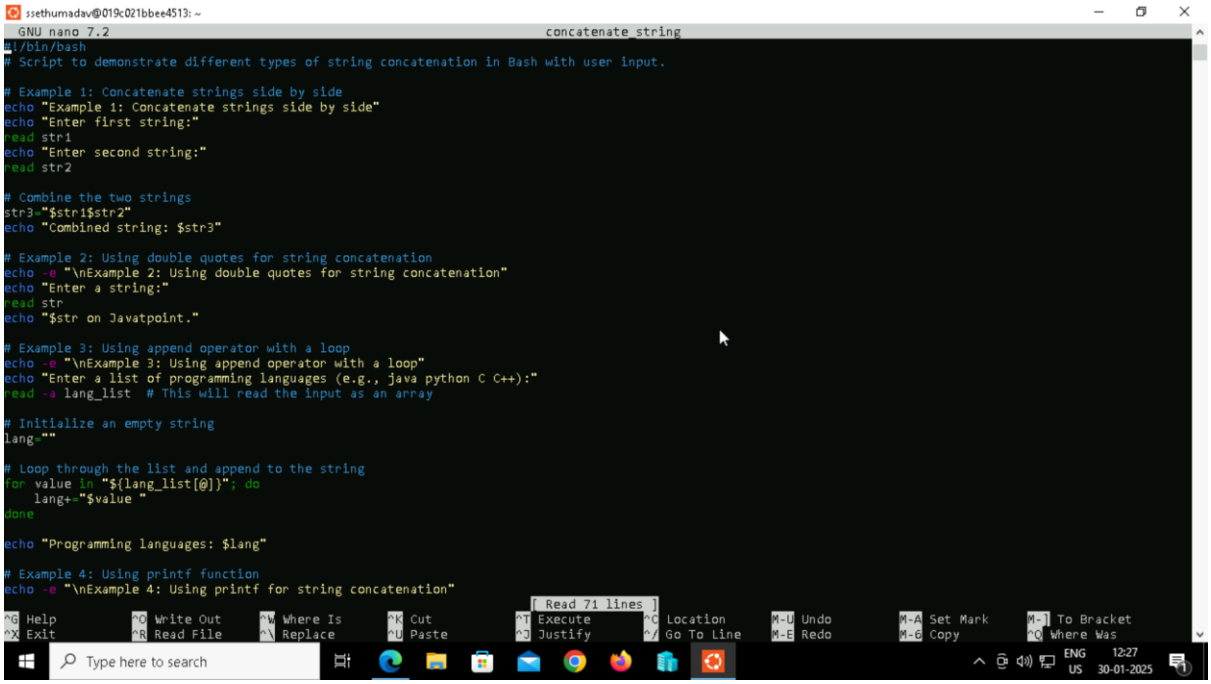
Example 4: Using the Printf Function

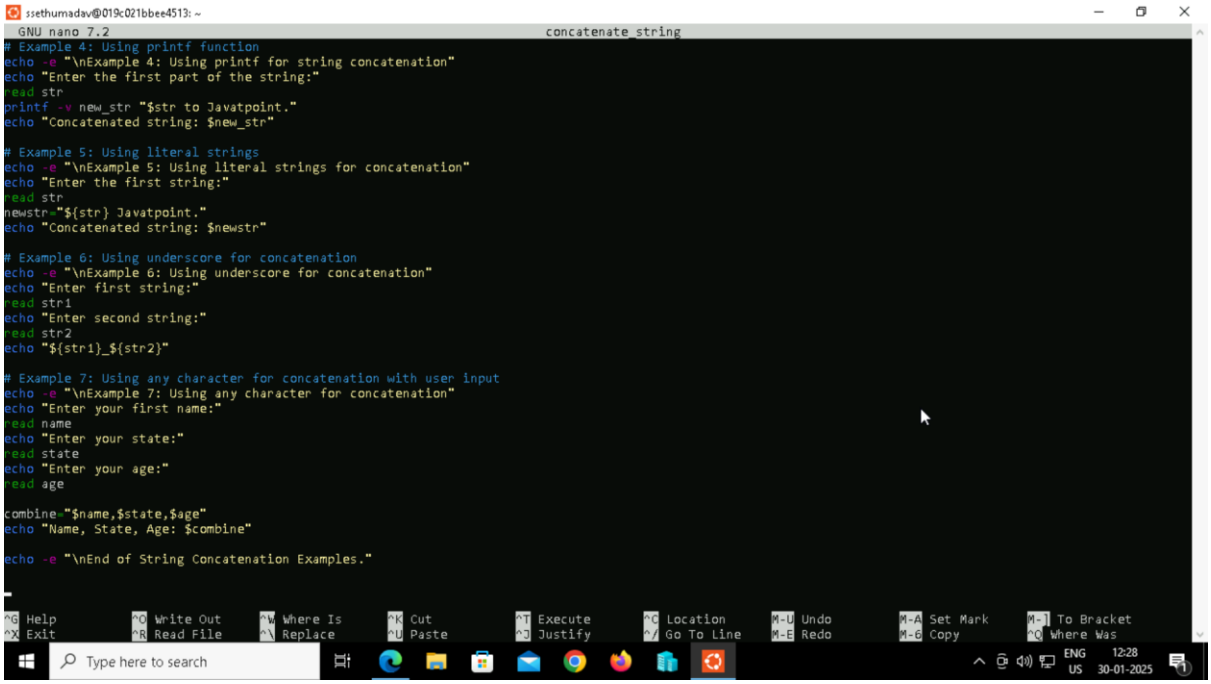
Example 5: Using Literal Strings

Example 6: Using Underscore

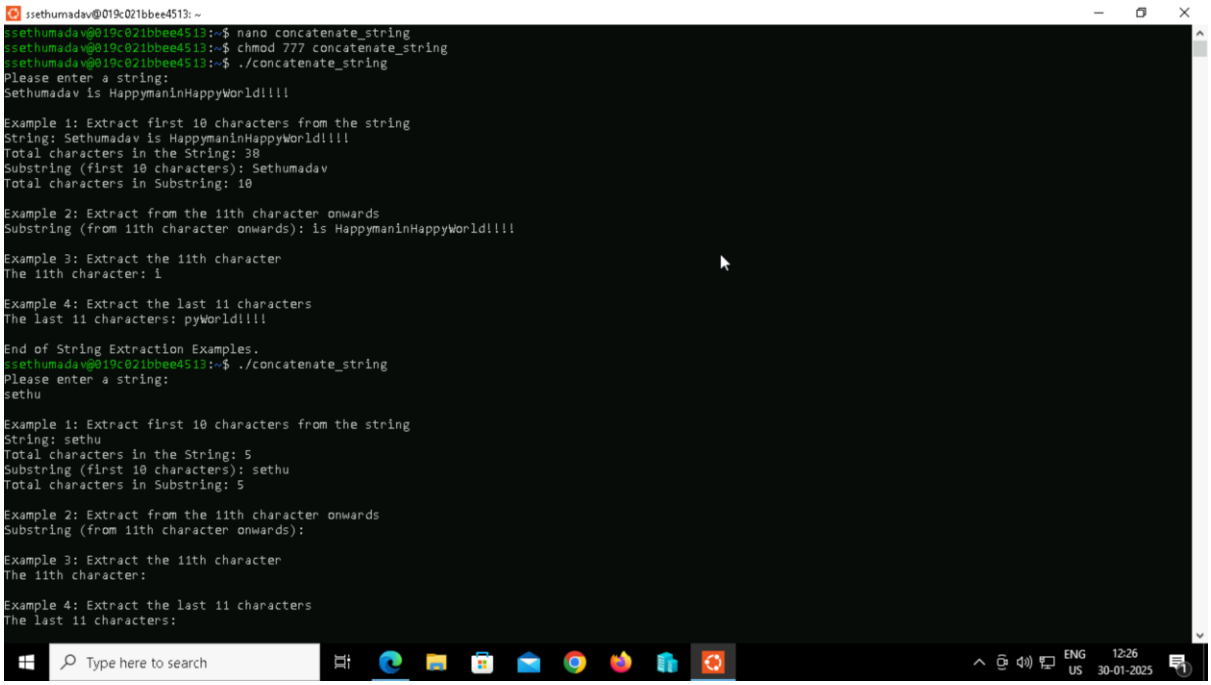
Example 7: Using any Character

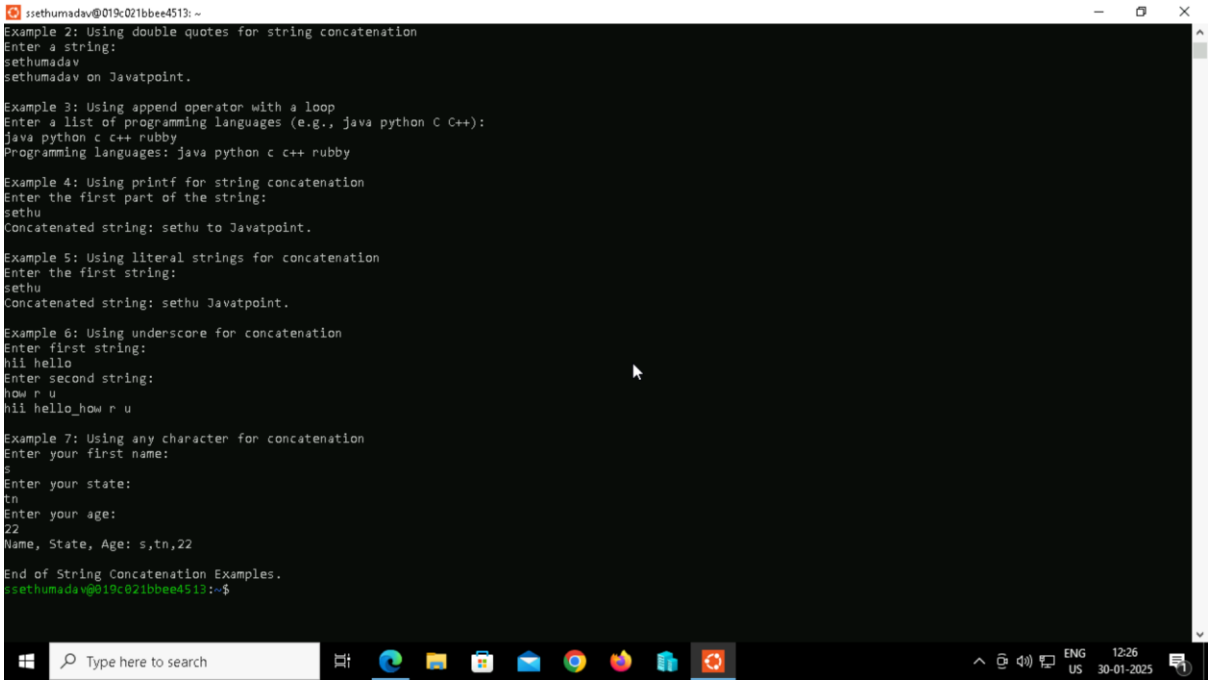
Code:for example 1 to 7:




ssethumadav@019c021bbee4513: ~
GNU nano 7.2 concatenate_string
Example 4: Using printf function
echo -e "\nExample 4: Using printf for string concatenation"
echo "Enter the first part of the string:"
read str
printf -v new_str "$str to Javatpoint."
echo "Concatenated string: $new_str"
Example 5: Using literal strings
echo -e "\nExample 5: Using literal strings for concatenation"
echo "Enter the first string:"
read str
newstr="${str} Javatpoint."
echo "Concatenated string: $newstr"
Example 6: Using underscore for concatenation
echo -e "\nExample 6: Using underscore for concatenation"
echo "Enter first string:"
read str1
echo "Enter second string:"
read str2
echo "${str1}_${str2}"
Example 7: Using any character for concatenation with user input
echo -e "\nExample 7: Using any character for concatenation"
echo "Enter your first name:"
read name
echo "Enter your state:"
read state
echo "Enter your age:"
read age
combine="$name,$state,$age"
echo "Name, State, Age: $combine"
echo -e "\nEnd of String Concatenation Examples."
^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo M-A Set Mark M-] To Bracket
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo M-6 Copy ^Q Where Was
Type here to search
ENG US 12:28 30-01-2025

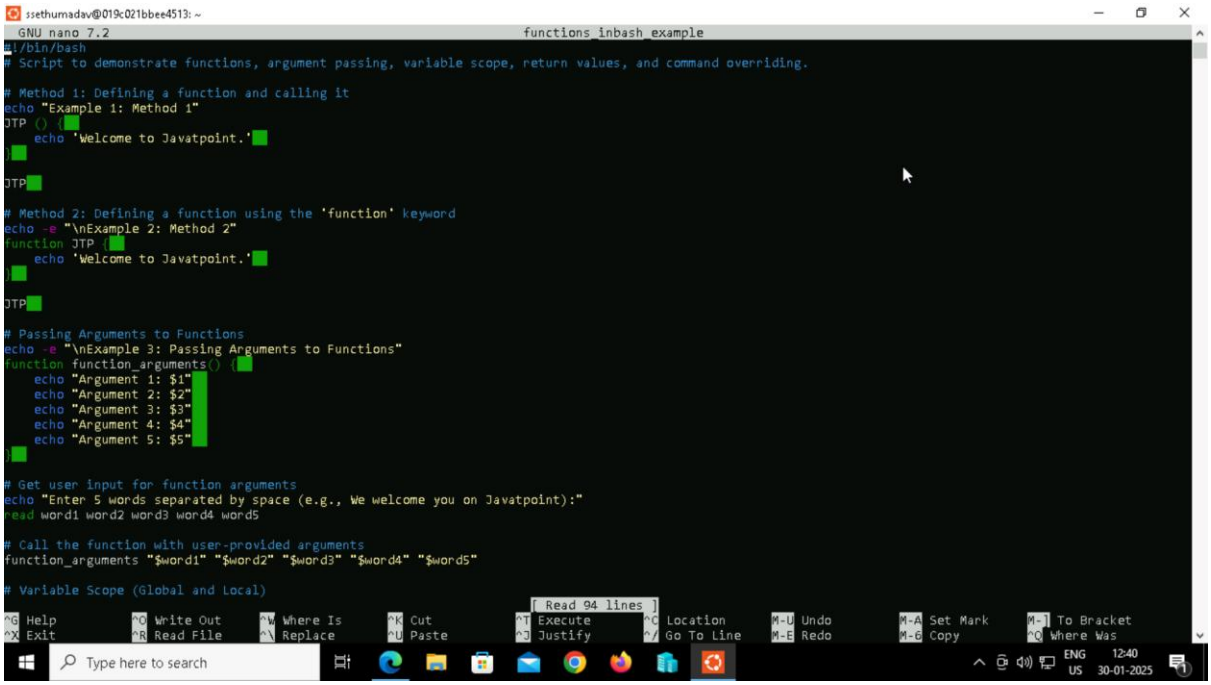
Output:

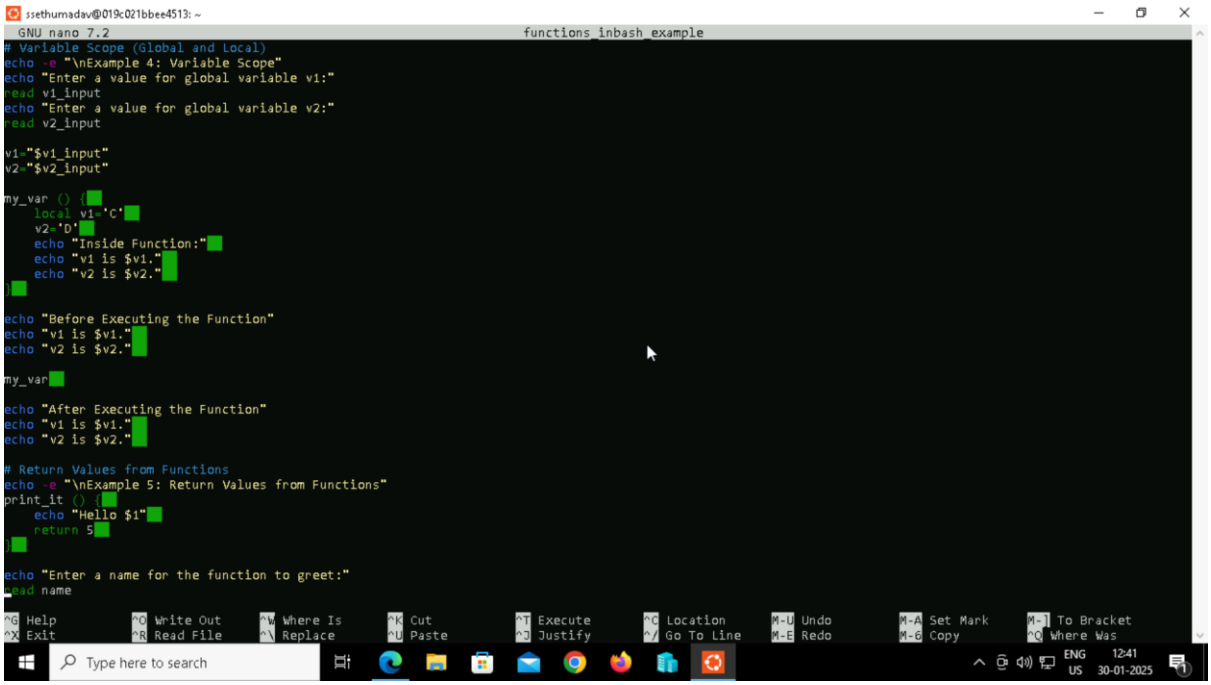

ssethumadav@019c021bbee4513: ~
ssethumadav@019c021bbee4513:~$ nano concatenate_string
ssethumadav@019c021bbee4513:~$ chmod 777 concatenate_string
ssethumadav@019c021bbee4513:~$ ./concatenate_string
Please enter a string:
Sethumadav is HappymaninHappyWorld!!!!
Example 1: Extract first 10 characters from the string
String: Sethumadav is HappymaninHappyWorld!!!!
Total characters in the String: 38
Substring (first 10 characters): Sethumadav
Total characters in Substring: 10
Example 2: Extract from the 11th character onwards
Substring (from 11th character onwards): is HappymaninHappyWorld!!!!
Example 3: Extract the 11th character
The 11th character: i
Example 4: Extract the last 11 characters
The last 11 characters: pyWorld!!!!
End of String Extraction Examples.
ssethumadav@019c021bbee4513:~$ ./concatenate_string
Please enter a string:
sethu
Example 1: Extract first 10 characters from the string
String: sethu
Total characters in the String: 5
Substring (first 10 characters): sethu
Total characters in Substring: 5
Example 2: Extract from the 11th character onwards
Substring (from 11th character onwards):
Example 3: Extract the 11th character
The 11th character:
Example 4: Extract the last 11 characters
The last 11 characters:
Type here to search
ENG US 12:26 30-01-2025

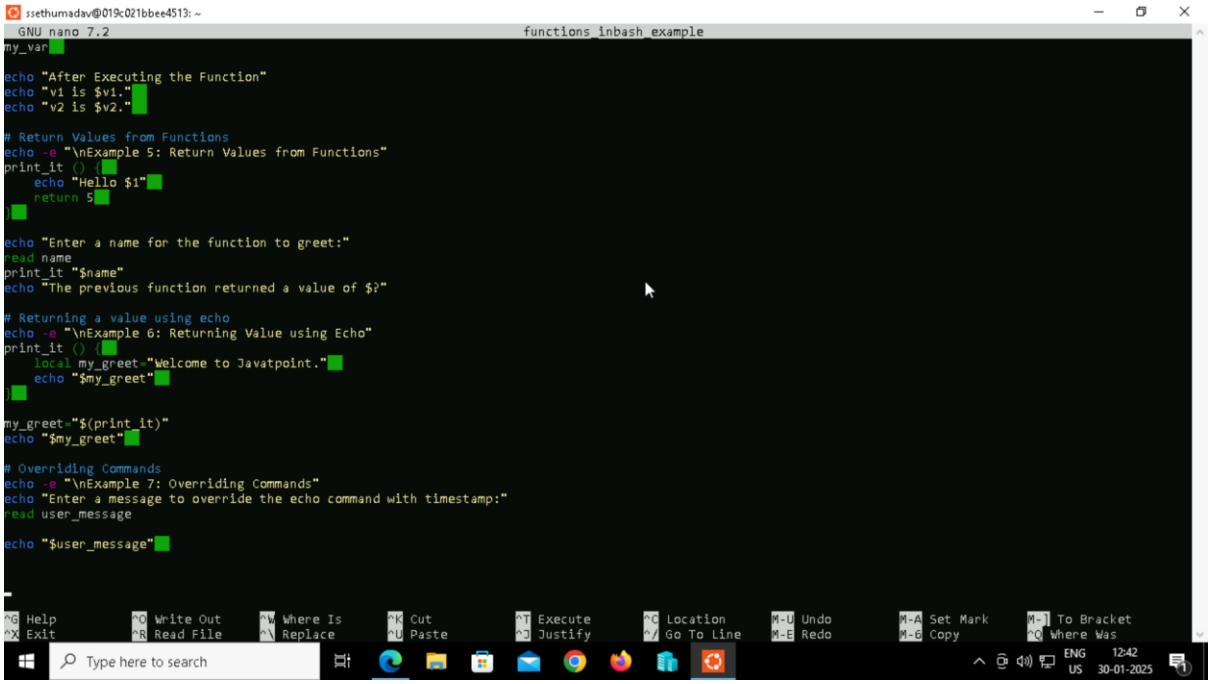

ssethumadav@019c021bbee4513: ~
Example 2: Using double quotes for string concatenation
Enter a string:
sethumadav
sethumadav on Javatpoint.
Example 3: Using append operator with a loop
Enter a list of programming languages (e.g., java python C C++):
java python c c++ rubby
Programming languages: java python c c++ rubby
Example 4: Using printf for string concatenation
Enter the first part of the string:
sethu
Concatenated string: sethu to Javatpoint.
Example 5: Using literal strings for concatenation
Enter the first string:
sethu
Concatenated string: sethu Javatpoint.
Example 6: Using underscore for concatenation
Enter first string:
hii hello
Enter second string:
how r u
hii hello_how r u
Example 7: Using any character for concatenation
Enter your first name:
s
Enter your state:
tn
Enter your age:
22
Name, State, Age: s,tn,22
End of String Concatenation Examples.
ssethumadav@019c021bbee4513:~$
Type here to search
ENG
US
12:26
30-01-2025

Bash_Functions_examples:

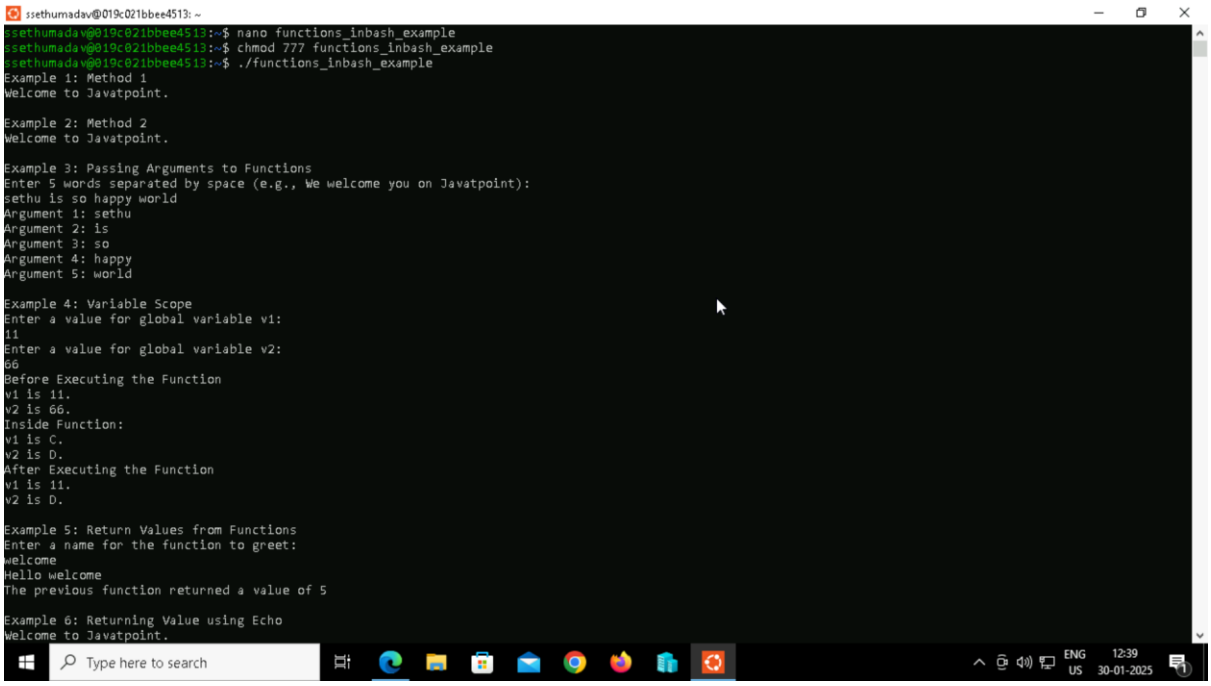
Code (example 1 to 7):

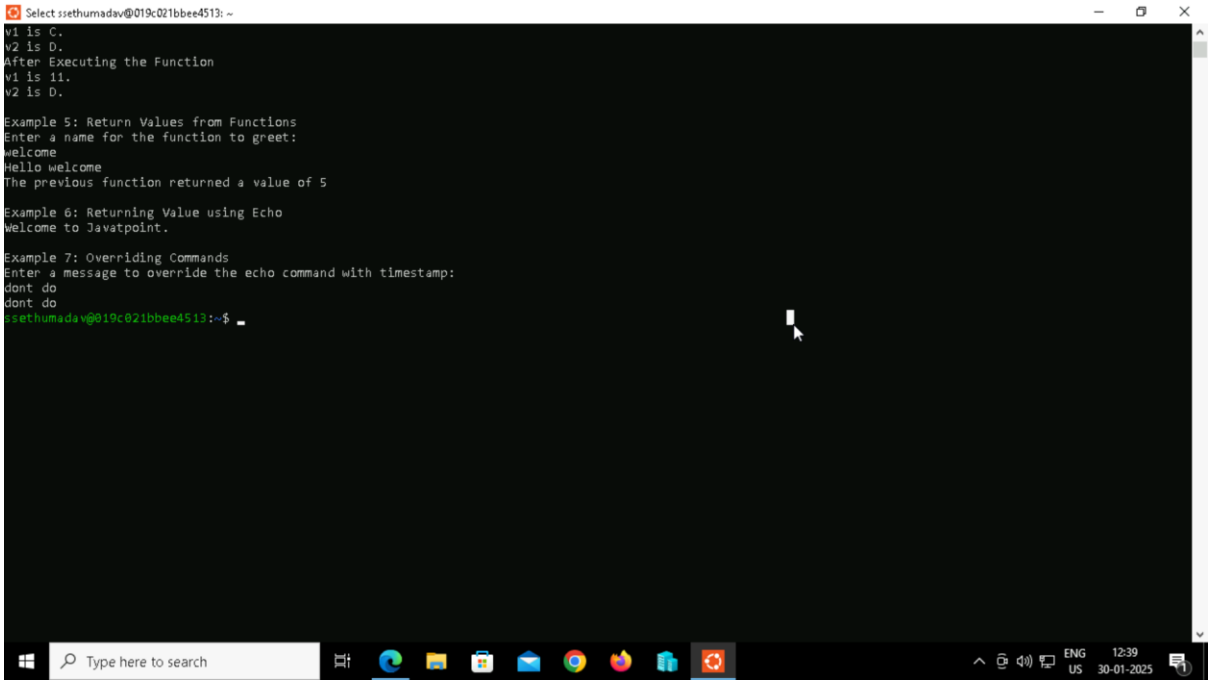





ssethumadav@019c021bbee4513: ~
GNU nano 7.2
functions_inbash_example
my_var
echo "After Executing the Function"
echo "v1 is $v1."
echo "v2 is $v2."
Return Values from Functions
echo -e "\nExample 5: Return Values from Functions"
print_it () {
echo "Hello $1"
return 5
}
echo "Enter a name for the function to greet:"
read name
print_it "$name"
echo "The previous function returned a value of $?"
Returning a value using echo
echo -e "\nExample 6: Returning Value using Echo"
print_it () {
local my_greet="Welcome to Javatpoint."
echo "$my_greet"
}
my_greet="$(print_it)"
echo "$my_greet"
Overriding Commands
echo -e "\nExample 7: Overriding Commands"
echo "Enter a message to override the echo command with timestamp:"
read user_message
echo "$user_message"
^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo M-A Set Mark M-] To Bracket
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo M-6 Copy ^Q Where Was
Type here to search
ENG US
12:42
30-01-2025

Outputs:

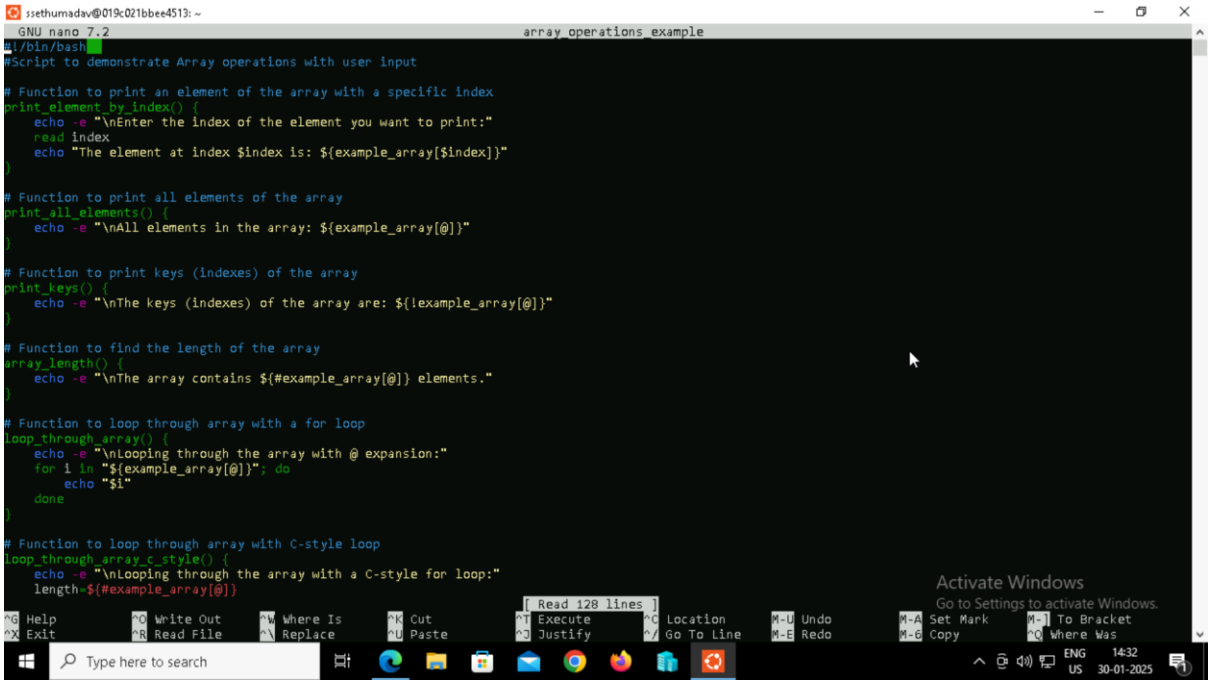

ssethumadav@019c021bbee4513: ~
ssethumadav@019c021bbee4513:~$ nano functions_inbash_example
ssethumadav@019c021bbee4513:~$ chmod 777 functions_inbash_example
ssethumadav@019c021bbee4513:~$ ./functions_inbash_example
Example 1: Method 1
Welcome to Javatpoint.
Example 2: Method 2
Welcome to Javatpoint.
Example 3: Passing Arguments to Functions
Enter 5 words separated by space (e.g., We welcome you on Javatpoint):
sethu is so happy world
Argument 1: sethu
Argument 2: is
Argument 3: so
Argument 4: happy
Argument 5: world
Example 4: Variable Scope
Enter a value for global variable v1:
11
Enter a value for global variable v2:
66
Before Executing the Function
v1 is 11.
v2 is 66.
Inside Function:
v1 is C.
v2 is D.
After Executing the Function
v1 is 11.
v2 is D.
Example 5: Return Values from Functions
Enter a name for the function to greet:
welcome
Hello welcome
The previous function returned a value of 5
Example 6: Returning Value using Echo
Welcome to Javatpoint.
Type here to search
ENG US
12:39
30-01-2025

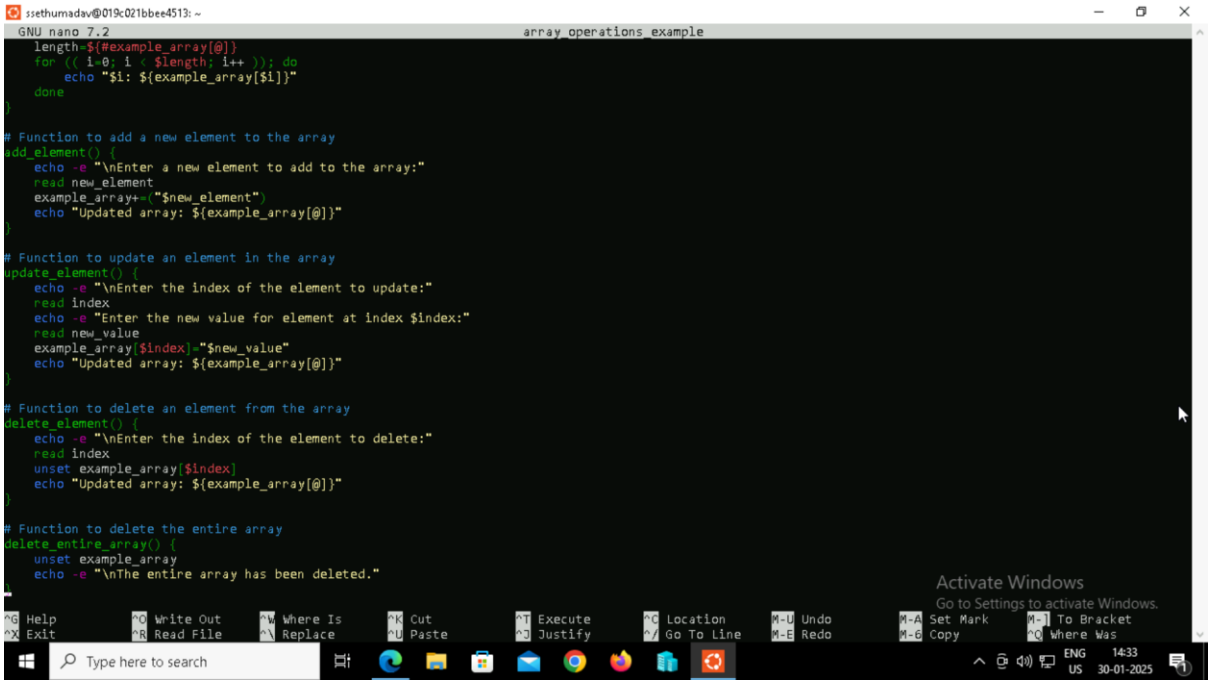

Select ssethumadav@019c021bbee4513: ~
v1 is C.
v2 is D.
After Executing the Function
v1 is 11.
v2 is D.
Example 5: Return Values from Functions
Enter a name for the function to greet:
welcome
Hello welcome
The previous function returned a value of 5
Example 6: Returning Value using Echo
Welcome to Javatpoint.
Example 7: Overriding Commands
Enter a message to override the echo command with timestamp:
dont do
dont do
ssethumadav@019c021bbee4513:~$
Type here to search
ENG
US
12:39
30-01-2025

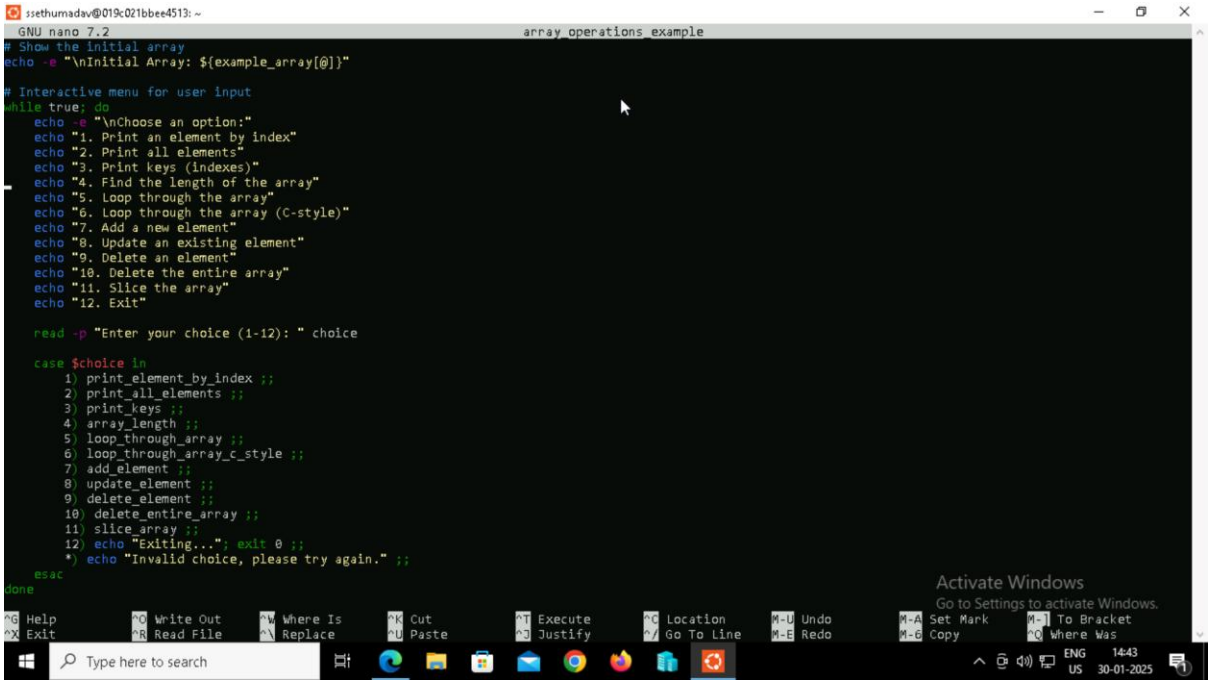
Array Operations: Examples

1. **Print an Element by Index**
2. **Print All Elements**
3. **Print Keys (Indexes) of the Array**
4. **Find the Length of the Array**
5. **Loop Through the Array Using @ Expansion**
6. **Loop Through the Array Using a C-style for Loop**
7. **Add a New Element to the Array**
8. **Update an Existing Element**
9. **Delete an Element from the Array**
10. **Delete the Entire Array**
11. **Slice the Array**

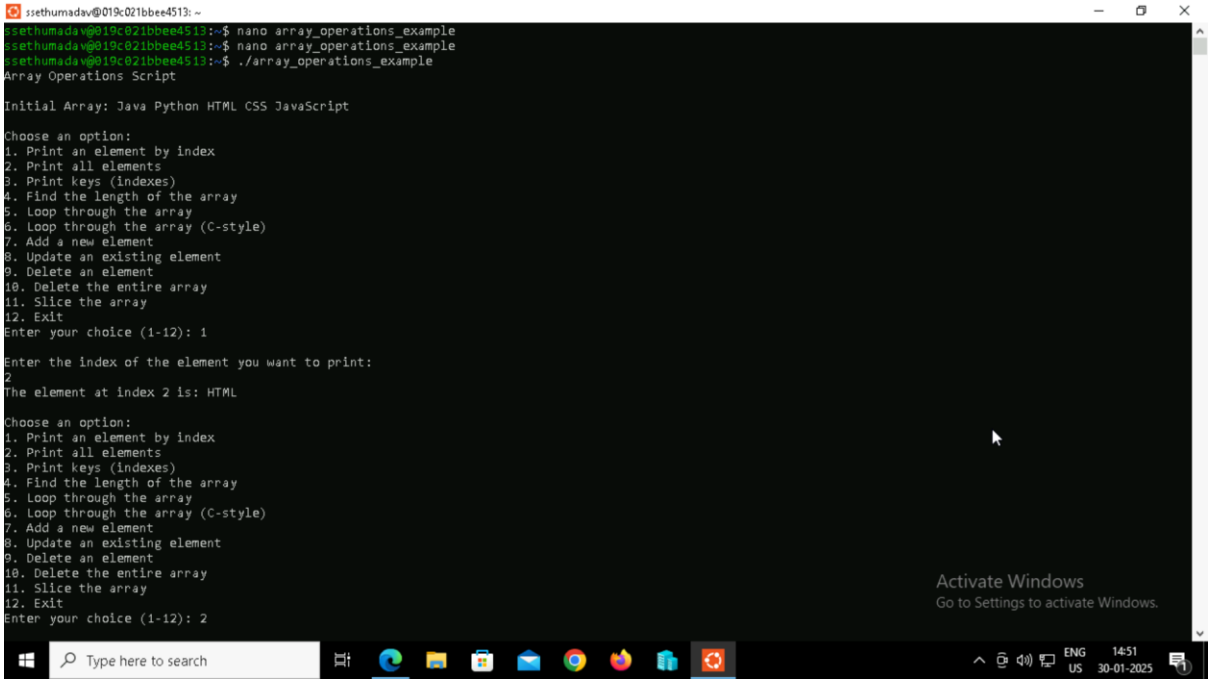
Code:

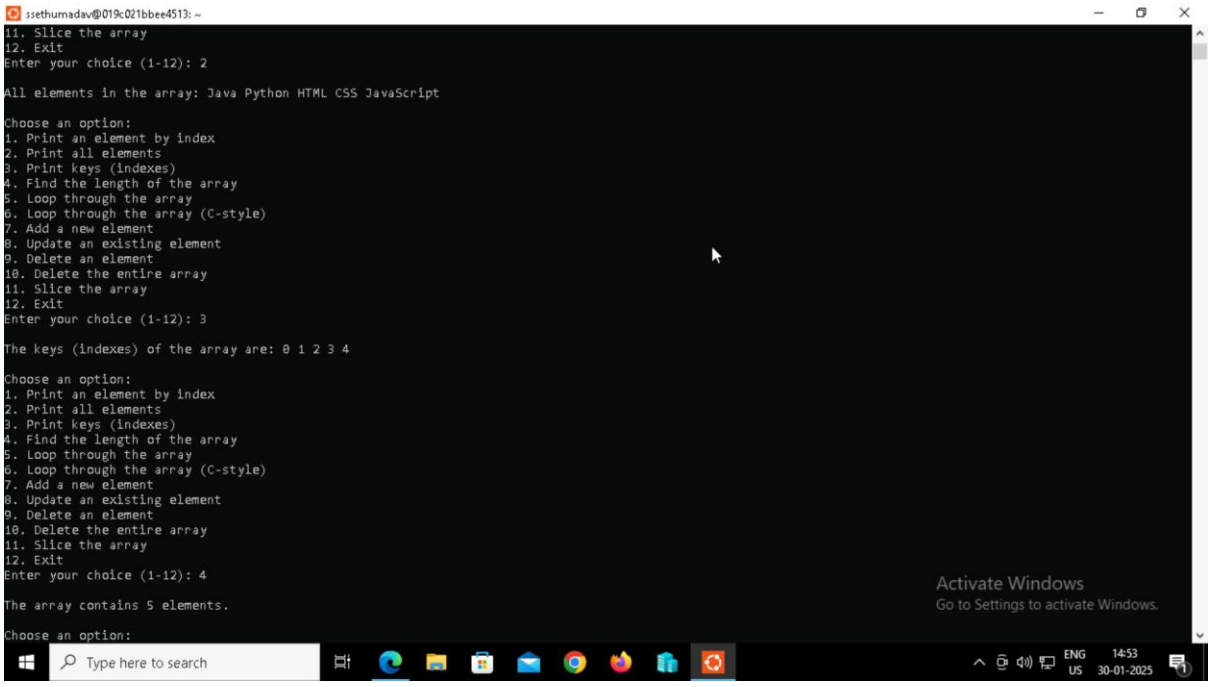


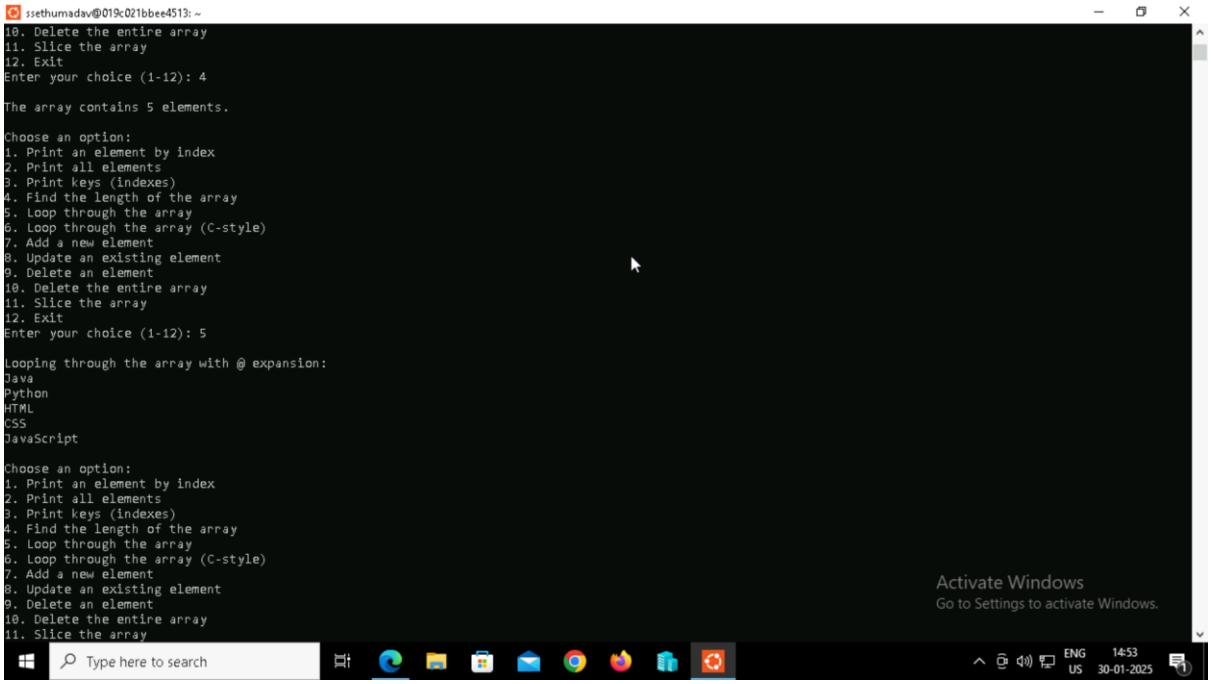

ssethumadav@019c021bbee4513: ~
GNU nano 7.2
array_operations_example
length=${#example_array[@]}
for ((i=0; i < $length; i++)); do
echo "$i: ${example_array[$i]}"
done
}
# Function to add a new element to the array
add_element() {
echo -e "\nEnter a new element to add to the array:"
read new_element
example_array+=("$new_element")
echo "Updated array: ${example_array[@]}"
}
# Function to update an element in the array
update_element() {
echo -e "\nEnter the index of the element to update:"
read index
echo -e "Enter the new value for element at index $index:"
read new_value
example_array[$index]="$new_value"
echo "Updated array: ${example_array[@]}"
}
# Function to delete an element from the array
delete_element() {
echo -e "\nEnter the index of the element to delete:"
read index
unset example_array[$index]
echo "Updated array: ${example_array[@]}"
}
# Function to delete the entire array
delete_entire_array() {
unset example_array
echo -e "\nThe entire array has been deleted."
}
Activate Windows
Go to Settings to activate Windows.
^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo M-A Set Mark M-] To Bracket
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo M-6 Copy ^Q Where Was
Type here to search
ENG US
14:33
30-01-2025

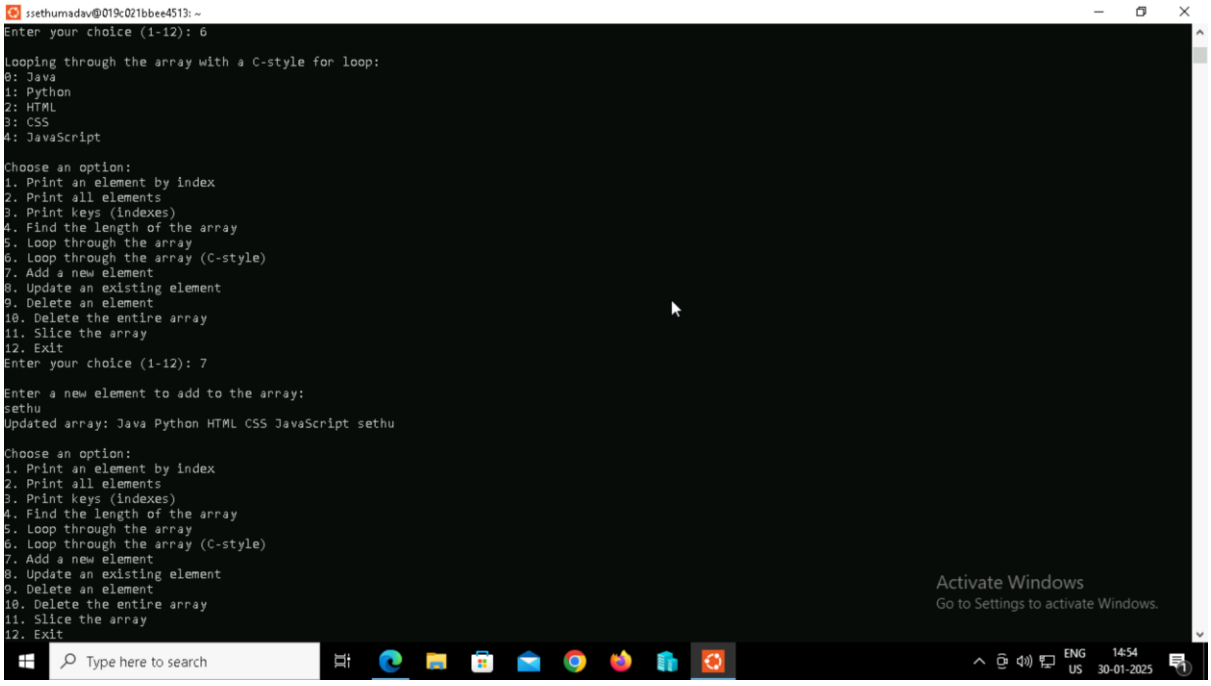

ssethumadav@019c021bbee4513: ~
GNU nano 7.2
array_operations_example
Show the initial array
echo -e "\nInitial Array: ${example_array[@]}"
# Interactive menu for user input
while true; do
echo -e "\nChoose an option:"
echo "1. Print an element by index"
echo "2. Print all elements"
echo "3. Print keys (indexes)"
echo "4. Find the length of the array"
echo "5. Loop through the array"
echo "6. Loop through the array (C-style)"
echo "7. Add a new element"
echo "8. Update an existing element"
echo "9. Delete an element"
echo "10. Delete the entire array"
echo "11. Slice the array"
echo "12. Exit"
read -p "Enter your choice (1-12): " choice
case $choice in
1) print_element_by_index ;;
2) print_all_elements ;;
3) print_keys ;;
4) array_length ;;
5) loop_through_array ;;
6) loop_through_array_c_style ;;
7) add_element ;;
8) update_element ;;
9) delete_element ;;
10) delete_entire_array ;;
11) slice_array ;;
12) echo "Exiting..."; exit 0 ;;
*) echo "Invalid choice, please try again." ;;
esac
done
Activate Windows
Go to Settings to activate Windows.
^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo M-A Set Mark M-] To Bracket
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo M-6 Copy ^Q Where Was
Type here to search
ENG US
14:43
30-01-2025

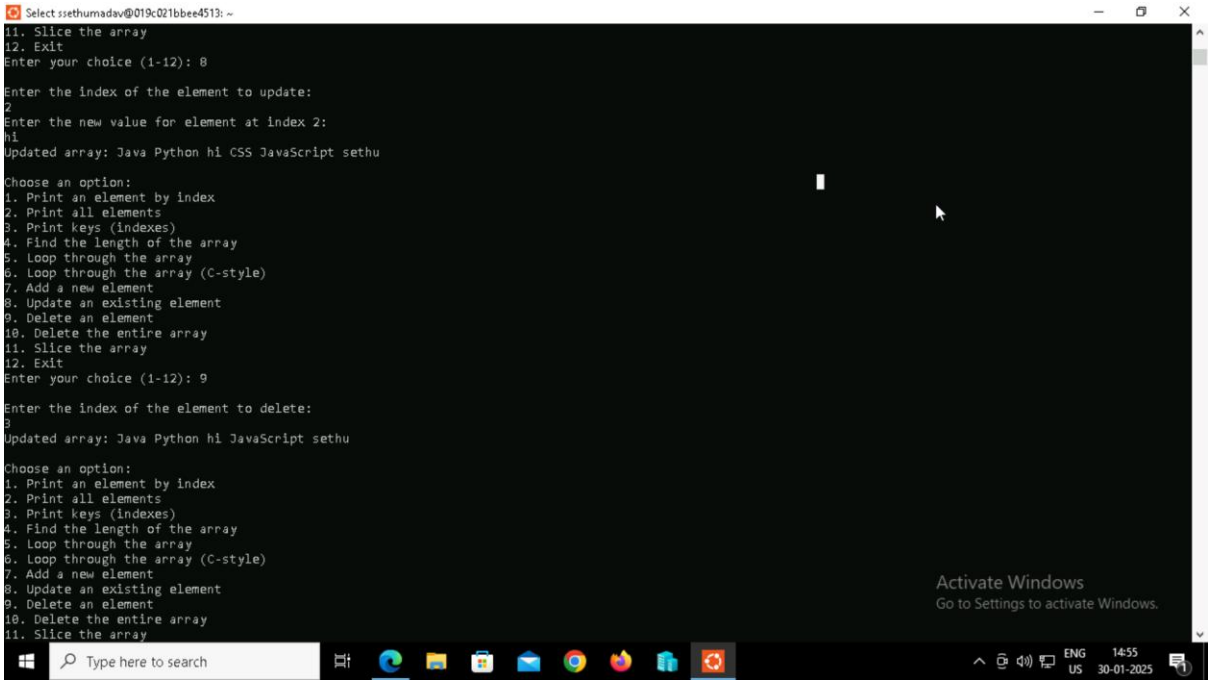
Outputs:

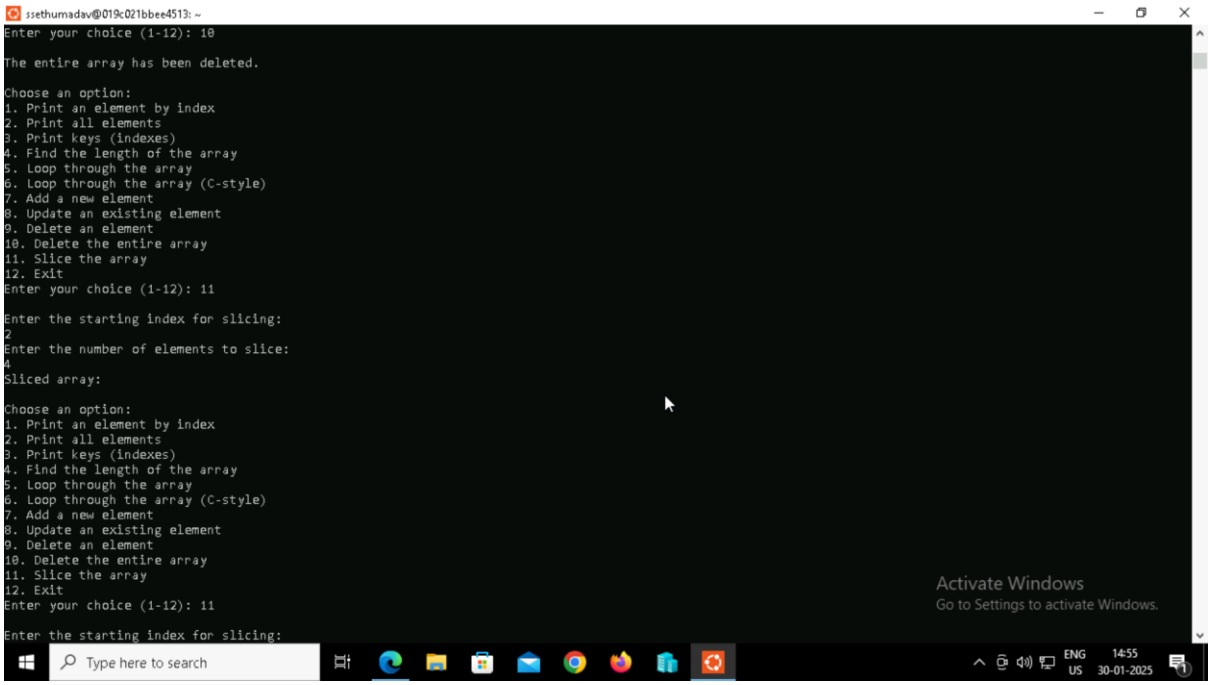

ssethumadav@019c021bbee4513: ~
ssethumadav@019c021bbee4513:~$ nano array_operations_example
ssethumadav@019c021bbee4513:~$ nano array_operations_example
ssethumadav@019c021bbee4513:~$ ./array_operations_example
Array Operations Script
Initial Array: Java Python HTML CSS JavaScript
Choose an option:
1. Print an element by index
2. Print all elements
3. Print keys (indexes)
4. Find the length of the array
5. Loop through the array
6. Loop through the array (C-style)
7. Add a new element
8. Update an existing element
9. Delete an element
10. Delete the entire array
11. Slice the array
12. Exit
Enter your choice (1-12): 1
Enter the index of the element you want to print:
2
The element at index 2 is: HTML
Choose an option:
1. Print an element by index
2. Print all elements
3. Print keys (indexes)
4. Find the length of the array
5. Loop through the array
6. Loop through the array (C-style)
7. Add a new element
8. Update an existing element
9. Delete an element
10. Delete the entire array
11. Slice the array
12. Exit
Enter your choice (1-12): 2
Activate Windows
Go to Settings to activate Windows.
Type here to search
ENG
US
14:51
30-01-2025


ssethumadav@019c021bbee4513: ~
11. Slice the array
12. Exit
Enter your choice (1-12): 2
All elements in the array: Java Python HTML CSS JavaScript
Choose an option:
1. Print an element by index
2. Print all elements
3. Print keys (indexes)
4. Find the length of the array
5. Loop through the array
6. Loop through the array (C-style)
7. Add a new element
8. Update an existing element
9. Delete an element
10. Delete the entire array
11. Slice the array
12. Exit
Enter your choice (1-12): 3
The keys (indexes) of the array are: 0 1 2 3 4
Choose an option:
1. Print an element by index
2. Print all elements
3. Print keys (indexes)
4. Find the length of the array
5. Loop through the array
6. Loop through the array (C-style)
7. Add a new element
8. Update an existing element
9. Delete an element
10. Delete the entire array
11. Slice the array
12. Exit
Enter your choice (1-12): 4
The array contains 5 elements.
Choose an option:
Activate Windows
Go to Settings to activate Windows.
Type here to search
ENG
US
14:53
30-01-2025


ssethumadav@019c021bbee4513: ~
10. Delete the entire array
11. Slice the array
12. Exit
Enter your choice (1-12): 4
The array contains 5 elements.
Choose an option:
1. Print an element by index
2. Print all elements
3. Print keys (indexes)
4. Find the length of the array
5. Loop through the array
6. Loop through the array (C-style)
7. Add a new element
8. Update an existing element
9. Delete an element
10. Delete the entire array
11. Slice the array
12. Exit
Enter your choice (1-12): 5
Looping through the array with @ expansion:
Java
Python
HTML
CSS
JavaScript
Choose an option:
1. Print an element by index
2. Print all elements
3. Print keys (indexes)
4. Find the length of the array
5. Loop through the array
6. Loop through the array (C-style)
7. Add a new element
8. Update an existing element
9. Delete an element
10. Delete the entire array
11. Slice the array
Activate Windows
Go to Settings to activate Windows.
Type here to search
ENG
US
14:53
30-01-2025


ssethumadav@019c021bbee4513: ~
Enter your choice (1-12): 6
Looping through the array with a C-style for loop:
0: Java
1: Python
2: HTML
3: CSS
4: JavaScript
Choose an option:
1. Print an element by index
2. Print all elements
3. Print keys (indexes)
4. Find the length of the array
5. Loop through the array
6. Loop through the array (C-style)
7. Add a new element
8. Update an existing element
9. Delete an element
10. Delete the entire array
11. Slice the array
12. Exit
Enter your choice (1-12): 7
Enter a new element to add to the array:
sethu
Updated array: Java Python HTML CSS JavaScript sethu
Choose an option:
1. Print an element by index
2. Print all elements
3. Print keys (indexes)
4. Find the length of the array
5. Loop through the array
6. Loop through the array (C-style)
7. Add a new element
8. Update an existing element
9. Delete an element
10. Delete the entire array
11. Slice the array
12. Exit
Activate Windows
Go to Settings to activate Windows.
Type here to search
ENG
US
14:54
30-01-2025


Select ssethumadav@019c021bbee4513: ~
11. Slice the array
12. Exit
Enter your choice (1-12): 8
Enter the index of the element to update:
2
Enter the new value for element at index 2:
hi
Updated array: Java Python hi CSS JavaScript sethu
Choose an option:
1. Print an element by index
2. Print all elements
3. Print keys (indexes)
4. Find the length of the array
5. Loop through the array
6. Loop through the array (C-style)
7. Add a new element
8. Update an existing element
9. Delete an element
10. Delete the entire array
11. Slice the array
12. Exit
Enter your choice (1-12): 9
Enter the index of the element to delete:
3
Updated array: Java Python hi JavaScript sethu
Choose an option:
1. Print an element by index
2. Print all elements
3. Print keys (indexes)
4. Find the length of the array
5. Loop through the array
6. Loop through the array (C-style)
7. Add a new element
8. Update an existing element
9. Delete an element
10. Delete the entire array
11. Slice the array
Activate Windows
Go to Settings to activate Windows.
Type here to search
ENG
US
14:55
30-01-2025


ssethumadav@019c021bbee4513: ~
Enter your choice (1-12): 10
The entire array has been deleted.
Choose an option:
1. Print an element by index
2. Print all elements
3. Print keys (indexes)
4. Find the length of the array
5. Loop through the array
6. Loop through the array (C-style)
7. Add a new element
8. Update an existing element
9. Delete an element
10. Delete the entire array
11. Slice the array
12. Exit
Enter your choice (1-12): 11
Enter the starting index for slicing:
2
Enter the number of elements to slice:
4
Sliced array:
Choose an option:
1. Print an element by index
2. Print all elements
3. Print keys (indexes)
4. Find the length of the array
5. Loop through the array
6. Loop through the array (C-style)
7. Add a new element
8. Update an existing element
9. Delete an element
10. Delete the entire array
11. Slice the array
12. Exit
Enter your choice (1-12): 11
Enter the starting index for slicing:
Activate Windows
Go to Settings to activate Windows.
Type here to search
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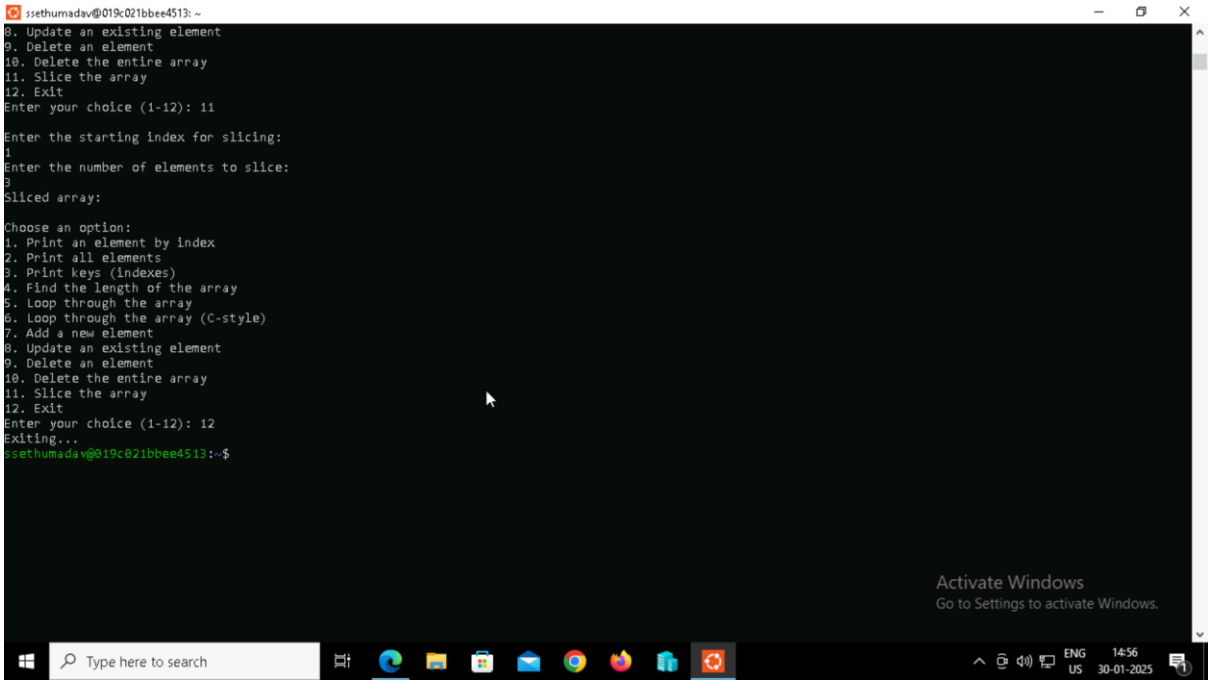
30-01-2025


ssethumadav@019c021bbee4513: ~
8. Update an existing element
9. Delete an element
10. Delete the entire array
11. Slice the array
12. Exit
Enter your choice (1-12): 11
Enter the starting index for slicing:
1
Enter the number of elements to slice:
3
Sliced array:
Choose an option:
1. Print an element by index
2. Print all elements
3. Print keys (indexes)
4. Find the length of the array
5. Loop through the array
6. Loop through the array (C-style)
7. Add a new element
8. Update an existing element
9. Delete an element
10. Delete the entire array
11. Slice the array
12. Exit
Enter your choice (1-12): 12
Exiting...
ssethumadav@019c021bbee4513:~$
Activate Windows
Go to Settings to activate Windows.
Type here to search
ENG
US
14:56
30-01-2025