## Course Name:AI Assistant Coding

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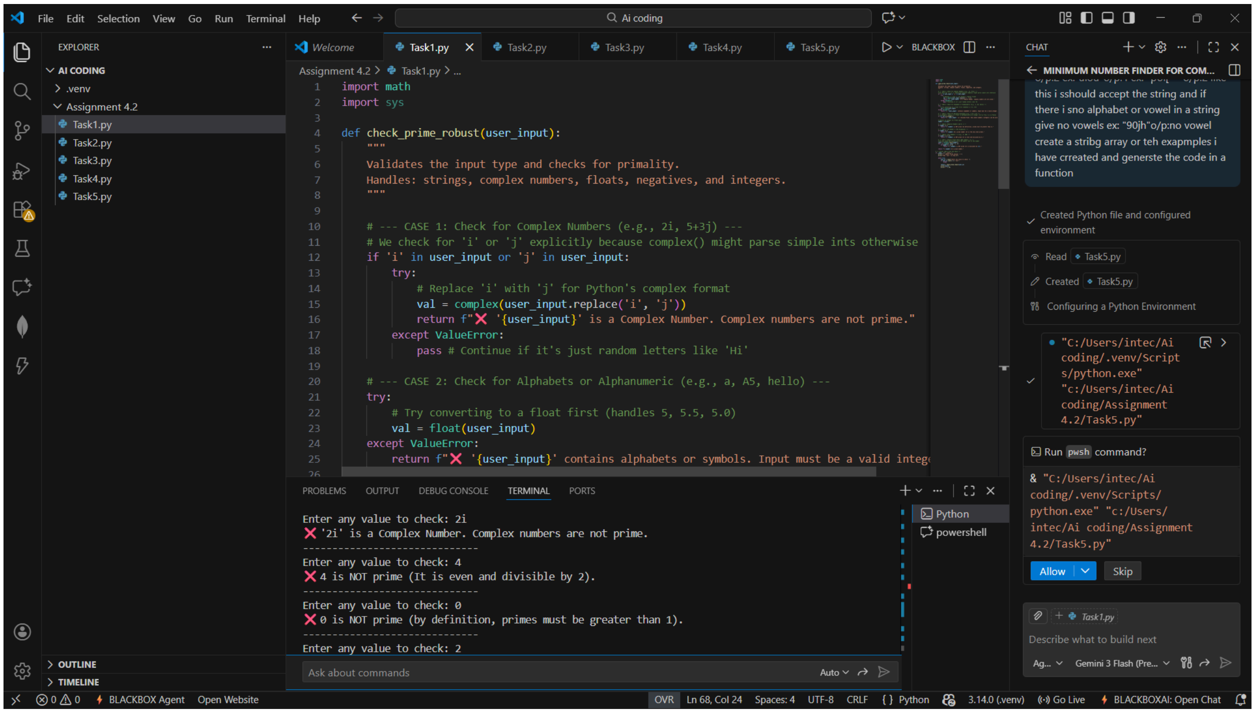
## Batch:33

## Hall-Ticket:2303A52415

## Assignment:4.2

**Task1:prompt is: write a python code whether a given number is prime number but check every case like ex: if i enter the input as even its is not prime like 2,4 , a complex number is not 2i prime ,alphabet not prime a ,and number after alphabet A5 ,consider all kinds of constants and generate the code**



```python
import math
import sys

def check_prime_robust(user_input):
    """
    Validates the input type and checks for primality.
    Handles: strings, complex numbers, floats, negatives, and integers.
    """

    # --- CASE 1: Check for Complex Numbers (e.g., 2i, 5+3j) ---
    # We check for 'i' or 'j' explicitly because complex() might parse simple ints otherwise
    if 'i' in user_input or 'j' in user_input:
        try:
            # Replace 'i' with 'j' for Python's complex format
            val = complex(user_input.replace('i', 'j'))
            return f"❌ '{user_input}' is a Complex Number. Complex numbers are not prime."
        except ValueError:
            pass # Continue if it's just random letters like 'Hi'

    # --- CASE 2: Check for Alphabets or Alphanumeric (e.g., a, A5, hello) ---
    try:
        # Try converting to a float first (handles 5, 5.5, 5.0)
        val = float(user_input)
    except ValueError:
        return f"❌ '{user_input}' contains alphabets or symbols. Input must be a valid intege
```

```
Enter any value to check: 2i
❌ '2i' is a Complex Number. Complex numbers are not prime.
-----------------------------
Enter any value to check: 4
❌ 4 is NOT prime (It is even and divisible by 2).
-----------------------------
Enter any value to check: 0
❌ 0 is NOT prime (by definition, primes must be greater than 1).
-----------------------------
Enter any value to check: 2
```

this i sshould accept the string and if there i sno alphabet or vowel in a string give no vowels ex: "90jh"o/p:no vowel create a stribg array or teh exapmples i have crreated and generste the code in a function

✓ Created Python file and configured environment

Read Task5.py

Created Task5.py

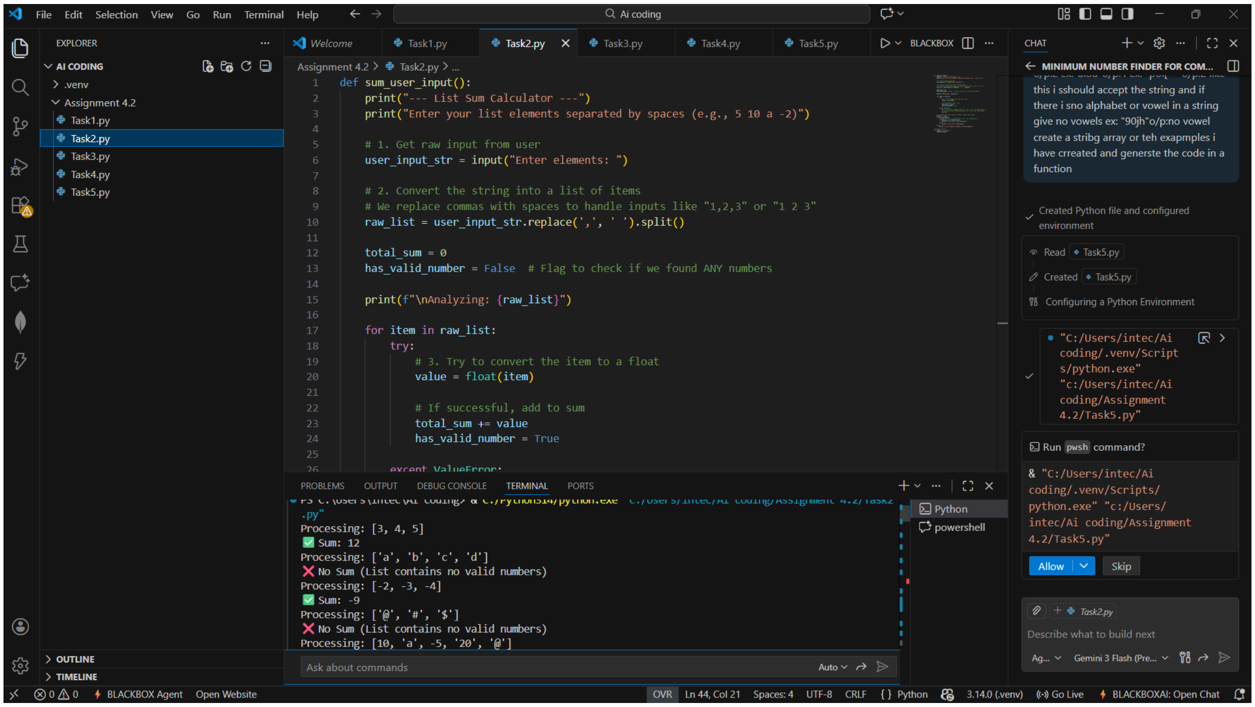
Configuring a Python Environment

```
"C:/Users/intec/Ai coding/.venv/Scripts/python.exe" "c:/Users/intec/Ai coding/Assignment 4.2/Task5.py"
```

Run pwsh command?

```
& "C:/Users/intec/Ai coding/.venv/Scripts/python.exe" "c:/Users/intec/Ai coding/Assignment 4.2/Task5.py"
```

**Task2:prompt: generate a python code in which it sums the elements in the given list as input ex: if list contains elements like alphabets [a,b,c,d] is as no sum ,if it contains like [3,4,5] is as sum ,if it contains the negative numbers like [-2,-3,-4] it has sum ,if it contains any sort of special numbers it doesn't has sum check every possibilities and generate the code**



```python
def sum_user_input():
    print("--- List Sum Calculator ---")
    print("Enter your list elements separated by spaces (e.g., 5 10 a -2)")

    # 1. Get raw input from user
    user_input_str = input("Enter elements: ")

    # 2. Convert the string into a list of items
    # We replace commas with spaces to handle inputs like "1,2,3" or "1 2 3"
    raw_list = user_input_str.replace(',', ' ').split()

    total_sum = 0
    has_valid_number = False  # Flag to check if we found ANY numbers

    print(f"\nAnalyzing: {raw_list}")

    for item in raw_list:
        try:
            # 3. Try to convert the item to a float
            value = float(item)

            # If successful, add to sum
            total_sum += value
            has_valid_number = True

        except ValueError:
```

```
PS C:\Users\intec\Ai coding> & C:/Python314/python.exe "c:/Users/intec/Ai coding/Assignment 4.2/Task2
.py"
Processing: [3, 4, 5]
✅ Sum: 12
Processing: ['a', 'b', 'c', 'd']
❌ No Sum (List contains no valid numbers)
Processing: [-2, -3, -4]
✅ Sum: -9
Processing: ['@', '#', '$']
❌ No Sum (List contains no valid numbers)
Processing: [10, 'a', -5, '20', '@']
```

this i sshould accept the string and if there i sno alphabet or vowel in a string give no vowels ex: "90jh"o/p:no vowel create a stribg array or teh exapmples i have crreated and generste the code in a function

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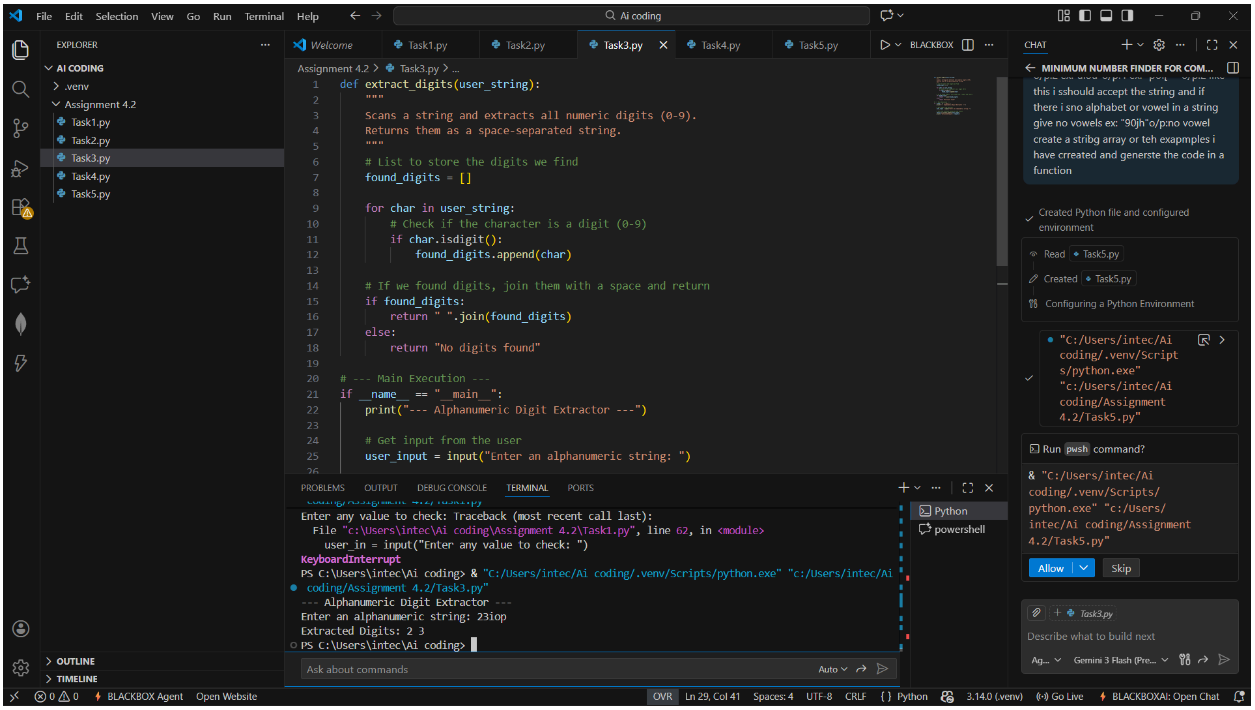
Configuring a Python Environment

```
"C:/Users/intec/Ai coding/.venv/Scripts/python.exe" "c:/Users/intec/Ai coding/Assignment 4.2/Task5.py"
```

Run pwsh command?

```
& "C:/Users/intec/Ai coding/.venv/Scripts/python.exe" "c:/Users/intec/Ai coding/Assignment 4.2/Task5.py"
```

**Task3:prompt:generate a python code where user enters the different kind of alphanumeric string and create function which extracts only the digits from the alphanumeric string ex : "5i6jk"o/p:5 6 ,"$%90" o/p:9 0 ,"A69[L}" O/P:9 so generate the code for the given prompt**



File Edit Selection View Go Run Terminal Help
Ai coding
EXPLORER
AI CODING
.venv
Assignment 4.2
Task1.py
Task2.py
Task3.py
Task4.py
Task5.py
OUTLINE
TIMELINE
Welcome
Task1.py
Task2.py
Task3.py
Task4.py
Task5.py
BLACKBOX
Assignment 4.2 > Task3.py > ...
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Python
powershell
Ask about commands
Auto
CHAT
MINIMUM NUMBER FINDER FOR COM...
Allow
Skip
Task3.py
Describe what to build next
Ag...
Gemini 3 Flash (Pre...
BLACKBOX Agent Open Website
OVR Ln 29, Col 41 Spaces: 4 UTF-8 CRLF { } Python 3.14.0 (.venv) Go Live BLACKBOXAI: Open Chat

```python
def extract_digits(user_string):
    """
    Scans a string and extracts all numeric digits (0-9).
    Returns them as a space-separated string.
    """
    # List to store the digits we find
    found_digits = []

    for char in user_string:
        # Check if the character is a digit (0-9)
        if char.isdigit():
            found_digits.append(char)

    # If we found digits, join them with a space and return
    if found_digits:
        return " ".join(found_digits)
    else:
        return "No digits found"

# --- Main Execution ---
if __name__ == "__main__":
    print("--- Alphanumeric Digit Extractor ---")

    # Get input from the user
    user_input = input("Enter an alphanumeric string: ")
```

```
Enter any value to check: Traceback (most recent call last):
  File "c:\Users\intec\Ai coding\Assignment 4.2\Task1.py", line 62, in <module>
    user_in = input("Enter any value to check: ")
KeyboardInterrupt
PS C:\Users\intec\Ai coding> & "C:/Users/intec/Ai coding/.venv/Scripts/python.exe" "c:/Users/intec/Ai
 coding/Assignment 4.2/Task3.py"
--- Alphanumeric Digit Extractor ---
Enter an alphanumeric string: 23iop
Extracted Digits: 2 3
PS C:\Users\intec\Ai coding>
```

this i sshould accept the string and if there i sno alphabet or vowel in a string give no vowels ex: "90jh"o/p:no vowel create a stribg array or teh exapmples i have crreated and generste the code in a function

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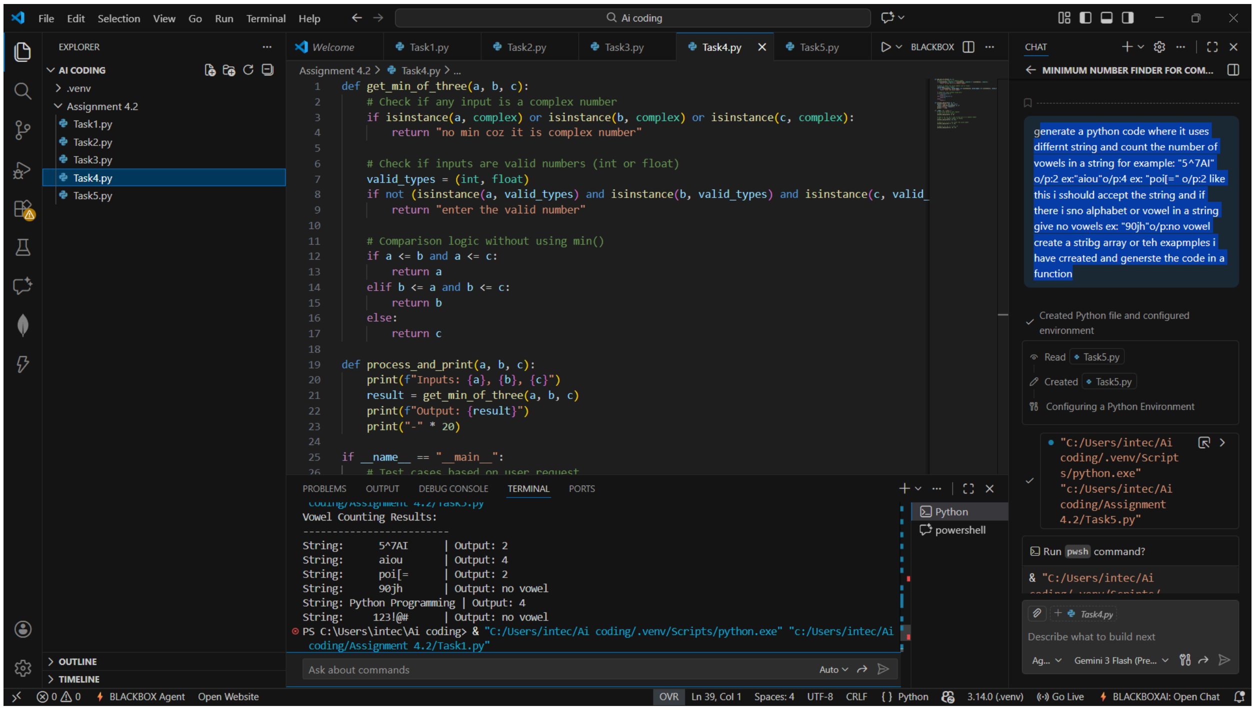
Configuring a Python Environment

```
"C:/Users/intec/Ai coding/.venv/Scripts/python.exe" "c:/Users/intec/Ai coding/Assignment 4.2/Task5.py"
```

Run pwsh command?

```
& "C:/Users/intec/Ai coding/.venv/Scripts/python.exe" "c:/Users/intec/Ai coding/Assignment 4.2/Task5.py"
```

**Task4:Generate a python code where it uses different string and count the number of vowels in a string for example: "5^7AI" o/p:2 ex:"aiou"o/p:4 ex: "poi[=" o/p:2 like this i sshould accept the string and if there is no alphabet or vowel in a string give no vowels ex: "90jh"o/p:no vowel create a string array or the examples I have created and generate the code in a function**



```python
def get_min_of_three(a, b, c):
    # Check if any input is a complex number
    if isinstance(a, complex) or isinstance(b, complex) or isinstance(c, complex):
        return "no min coz it is complex number"

    # Check if inputs are valid numbers (int or float)
    valid_types = (int, float)
    if not (isinstance(a, valid_types) and isinstance(b, valid_types) and isinstance(c, valid_
        return "enter the valid number"

    # Comparison logic without using min()
    if a <= b and a <= c:
        return a
    elif b <= a and b <= c:
        return b
    else:
        return c

def process_and_print(a, b, c):
    print(f"Inputs: {a}, {b}, {c}")
    result = get_min_of_three(a, b, c)
    print(f"Output: {result}")
    print("-" * 20)

if __name__ == "__main__":
    # Test cases based on user request
```

```
 coding/Assignment 4.2/Task5.py
Vowel Counting Results:
------------------------
String:      5^7AI      | Output: 2
String:      aiou       | Output: 4
String:      poi[=      | Output: 2
String:      90jh       | Output: no vowel
String: Python Programming | Output: 4
String:     123!@#      | Output: no vowel
PS C:\Users\intec\Ai coding> & "C:/Users/intec/Ai coding/.venv/Scripts/python.exe" "c:/Users/intec/Ai
 coding/Assignment 4.2/Task1.py"
```

generate a python code where it uses differnt string and count the number of vowels in a string for example: "5^7AI" o/p:2 ex:"aiou"o/p:4 ex: "poi[=" o/p:2 like this i sshould accept the string and if there i sno alphabet or vowel in a string give no vowels ex: "90jh"o/p:no vowel create a stribg array or teh exapmples i have crreated and generste the code in a function

✓ Created Python file and configured environment

Read Task5.py

Created Task5.py

Configuring a Python Environment

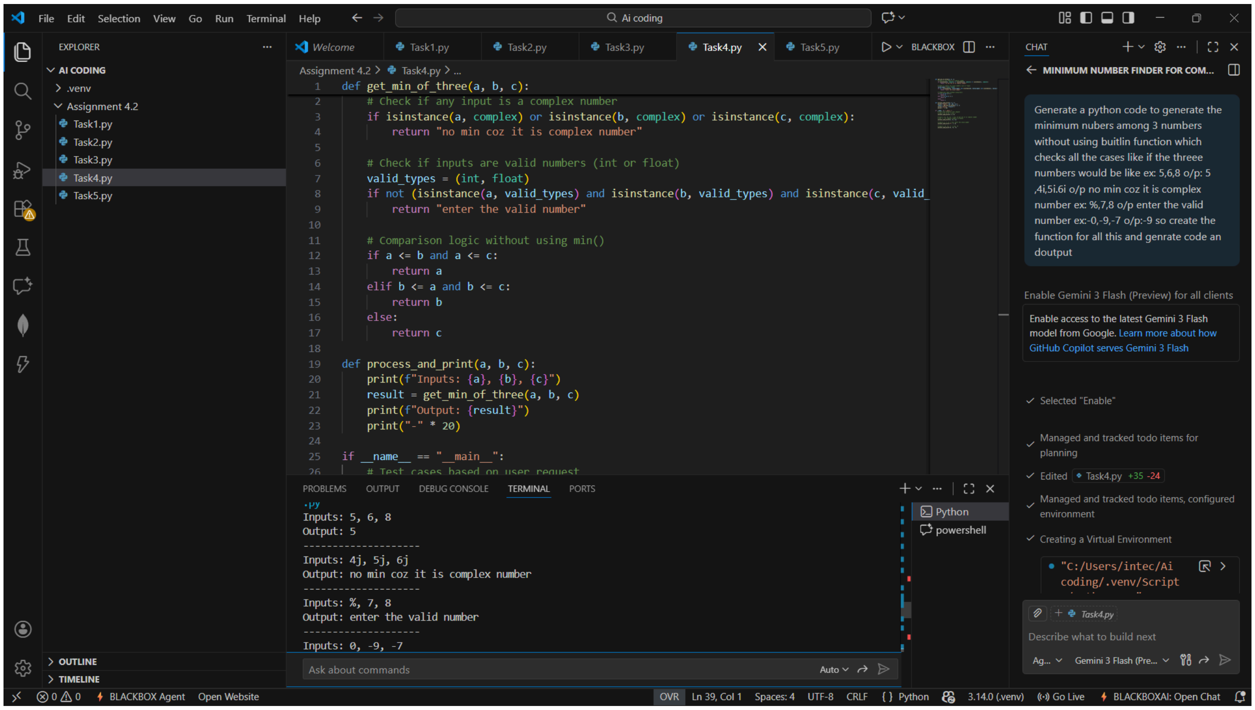
```
"C:/Users/intec/Ai coding/.venv/Scripts/python.exe" "c:/Users/intec/Ai coding/Assignment 4.2/Task5.py"
```

Run pwsh command?

```
& "C:/Users/intec/Ai
```

Task4.py

**Task5:Generate a python code to generate the minimum numbers among 3 numbers without using builtin function which checks all the cases like if the three numbers would be like ex: 5,6,8 o/p: 5 ,4i,5i.6i o/p no min coz it is complex number ex: %,7,8 o/p enter the valid number ex:-0,-9,-7 o/p:-9 so create the function for all this and generate code and output**



```python
def get_min_of_three(a, b, c):
    # Check if any input is a complex number
    if isinstance(a, complex) or isinstance(b, complex) or isinstance(c, complex):
        return "no min coz it is complex number"

    # Check if inputs are valid numbers (int or float)
    valid_types = (int, float)
    if not (isinstance(a, valid_types) and isinstance(b, valid_types) and isinstance(c, valid_
        return "enter the valid number"

    # Comparison logic without using min()
    if a <= b and a <= c:
        return a
    elif b <= a and b <= c:
        return b
    else:
        return c

def process_and_print(a, b, c):
    print(f"Inputs: {a}, {b}, {c}")
    result = get_min_of_three(a, b, c)
    print(f"Output: {result}")
    print("-" * 20)

if __name__ == "__main__":
    # Test cases based on user request
```

```
.py
Inputs: 5, 6, 8
Output: 5
--------------------
Inputs: 4j, 5j, 6j
Output: no min coz it is complex number
--------------------
Inputs: %, 7, 8
Output: enter the valid number
--------------------
Inputs: 0, -9, -7
```

Generate a python code to generate the minimum nubers among 3 numbers without using buitlin function which checks all the cases like if the threee numbers would be like ex: 5,6,8 o/p: 5 ,4i,5i.6i o/p no min coz it is complex number ex: %,7,8 o/p enter the valid number ex:-0,-9,-7 o/p:-9 so create the function for all this and genrate code an doutput

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✓ Selected "Enable"

✓ Managed and tracked todo items for planning

✓ Edited Task4.py +35 -24

✓ Managed and tracked todo items, configured environment

✓ Creating a Virtual Environment

```
"C:/Users/intec/Ai coding/.venv/Script
```