AI-Assisted Coding
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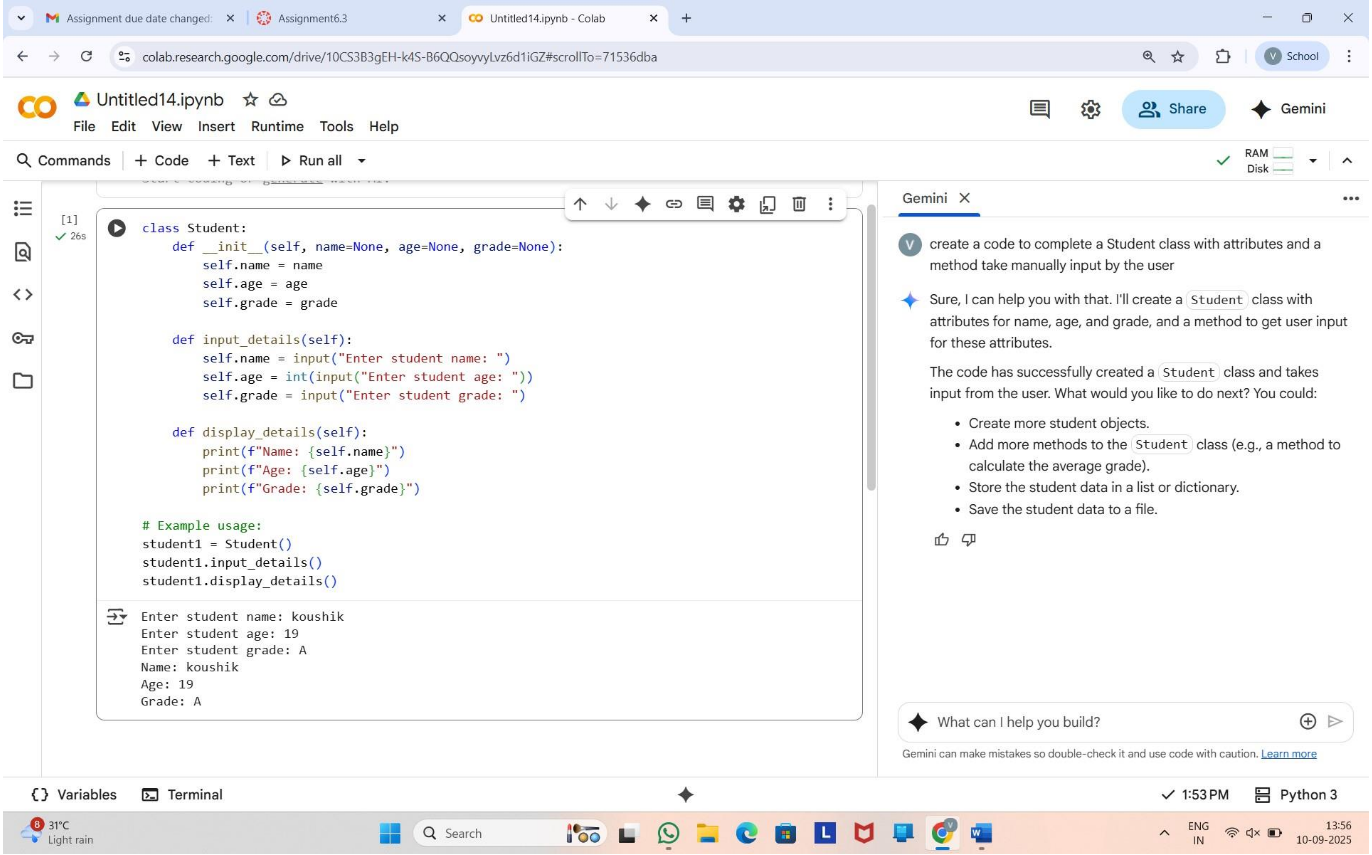
Task-1:

Prompt: Create a code to complete a Student class with attributes and a method take manually input by the user.

Code&Output:



```
class Student:
    def __init__(self, name=None, age=None, grade=None):
        self.name = name
        self.age = age
        self.grade = grade

    def input_details(self):
        self.name = input("Enter student name: ")
        self.age = int(input("Enter student age: "))
        self.grade = input("Enter student grade: ")

    def display_details(self):
        print(f"Name: {self.name}")
        print(f"Age: {self.age}")
        print(f"Grade: {self.grade}")

# Example usage:
student1 = Student()
student1.input_details()
student1.display_details()
```

```
Enter student name: koushik
Enter student age: 19
Enter student grade: A
Name: koushik
Age: 19
Grade: A
```

create a code to complete a Student class with attributes and a method take manually input by the user

Sure, I can help you with that. I'll create a `Student` class with attributes for name, age, and grade, and a method to get user input for these attributes.

The code has successfully created a `Student` class and takes input from the user. What would you like to do next? You could:

- Create more student objects.
- Add more methods to the `Student` class (e.g., a method to calculate the average grade).
- Store the student data in a list or dictionary.
- Save the student data to a file.

What can I help you build?

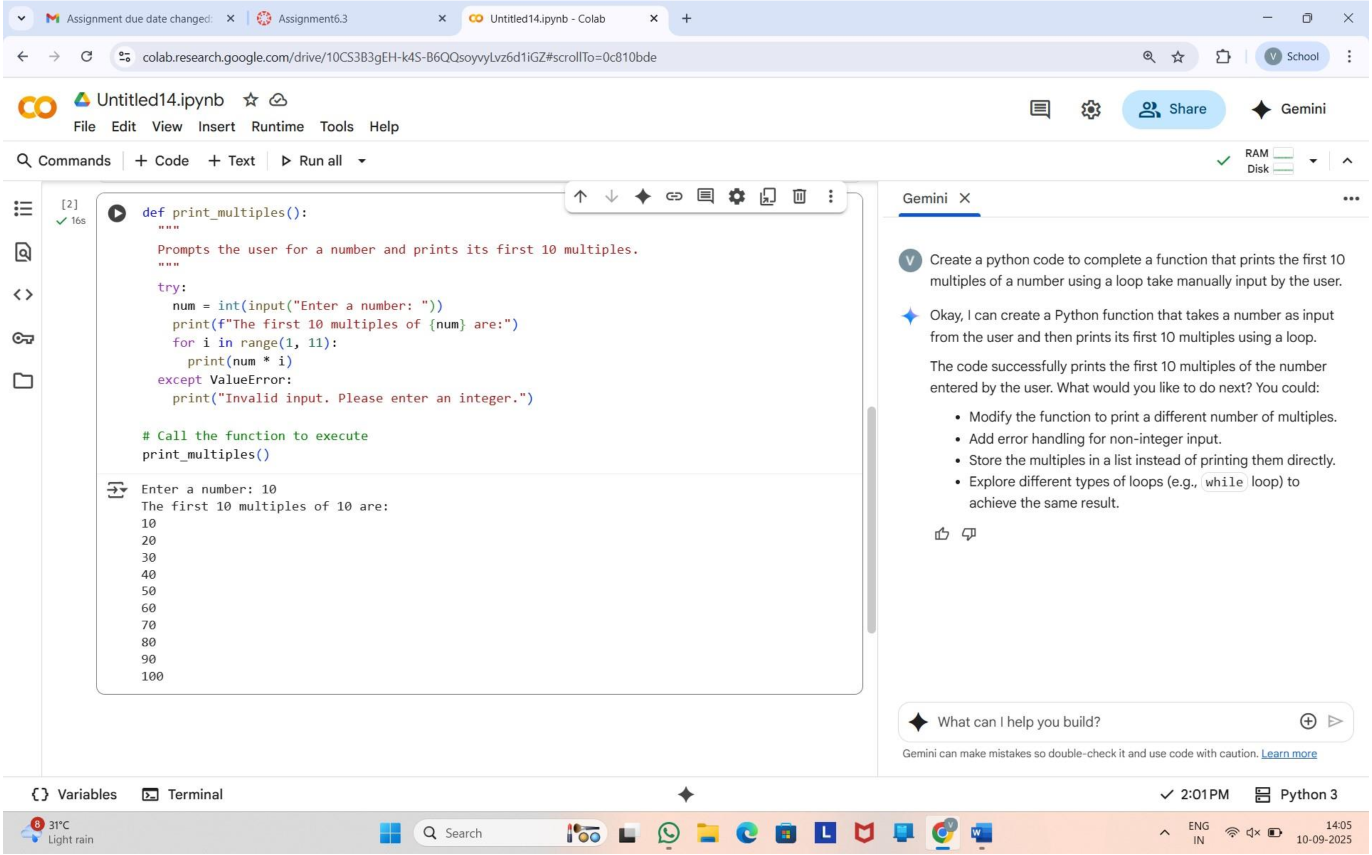
Gemini can make mistakes so double-check it and use code with caution. Learn more

Observation: The task successfully demonstrated how to create a Python class with attributes and a method that takes user input to populate those attributes. This is a fundamental concept in object-oriented programming for creating custom data structures and behaviors.

Task-2:

Prompt: Create a python code to complete a function that prints the first 10 multiples of a number using a loop take manually input by the user.

Code&Output:



```python
def print_multiples():
  """
  Prompts the user for a number and prints its first 10 multiples.
  """
  try:
    num = int(input("Enter a number: "))
    print(f"The first 10 multiples of {num} are:")
    for i in range(1, 11):
      print(num * i)
  except ValueError:
    print("Invalid input. Please enter an integer.")

# Call the function to execute
print_multiples()
```

```
Enter a number: 10
The first 10 multiples of 10 are:
10
20
30
40
50
60
70
80
90
100
```

Gemini

Create a python code to complete a function that prints the first 10 multiples of a number using a loop take manually input by the user.

Okay, I can create a Python function that takes a number as input from the user and then prints its first 10 multiples using a loop.

The code successfully prints the first 10 multiples of the number entered by the user. What would you like to do next? You could:

- Modify the function to print a different number of multiples.
- Add error handling for non-integer input.
- Store the multiples in a list instead of printing them directly.
- Explore different types of loops (e.g., `while` loop) to achieve the same result.

What can I help you build?

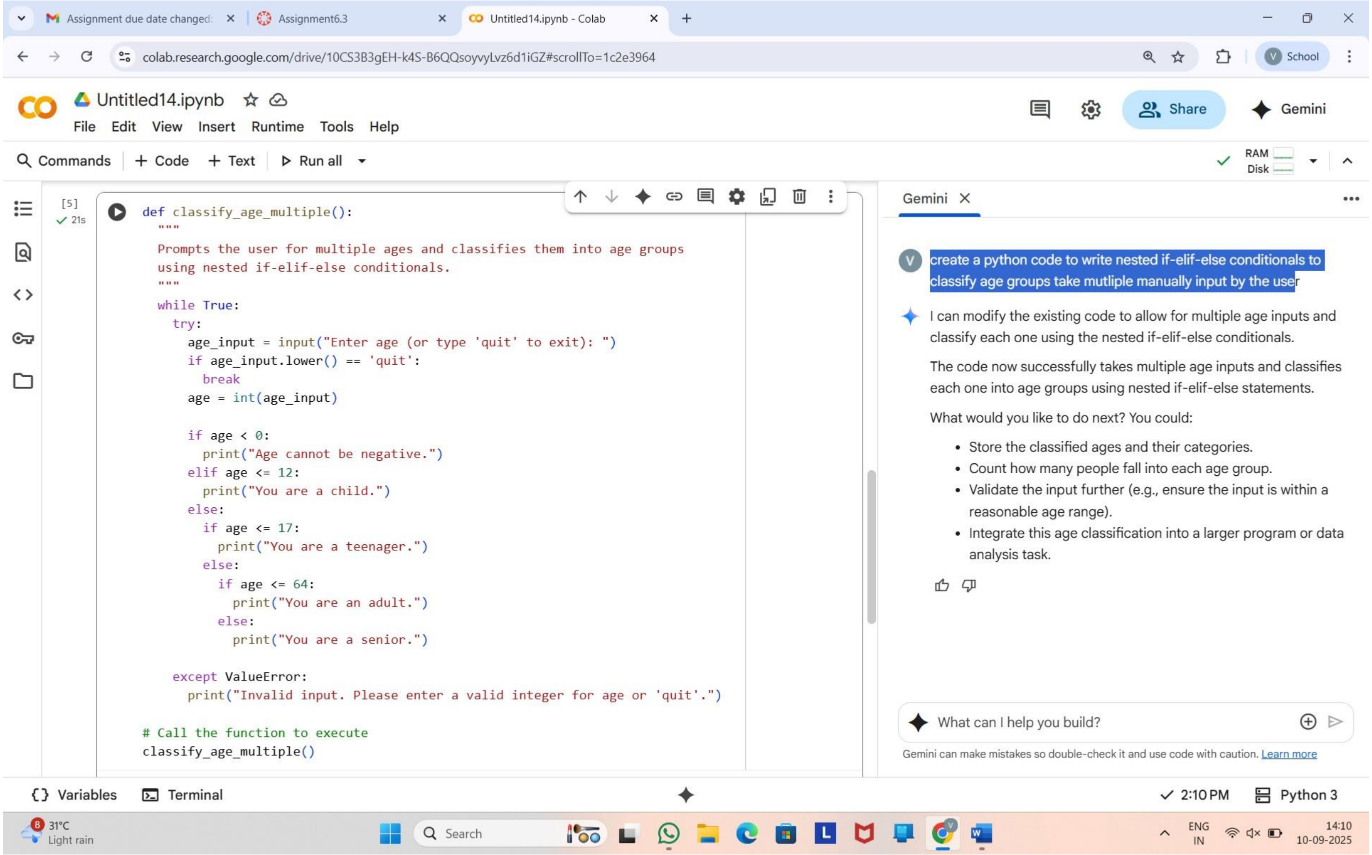
Gemini can make mistakes so double-check it and use code with caution. Learn more

Observation: This task successfully demonstrated how to define a Python function that takes user input and uses a for loop to iterate and perform a calculation (multiplication) a specific number of times. It also included basic error handling for invalid input

Task-3:

Prompt: Create a python code to write nested if-elifelse conditionals to classify age groups take mutliple manually input by the user.

Code&Output:



```
def classify_age_multiple():
  """
  Prompts the user for multiple ages and classifies them into age groups
  using nested if-elif-else conditionals.
  """
  while True:
    try:
      age_input = input("Enter age (or type 'quit' to exit): ")
      if age_input.lower() == 'quit':
        break
      age = int(age_input)

      if age < 0:
        print("Age cannot be negative.")
      elif age <= 12:
        print("You are a child.")
      else:
        if age <= 17:
          print("You are a teenager.")
        else:
          if age <= 64:
            print("You are an adult.")
          else:
            print("You are a senior.")

    except ValueError:
      print("Invalid input. Please enter a valid integer for age or 'quit'.")

# Call the function to execute
classify_age_multiple()
```

Gemini

create a python code to write nested if-elif-else conditionals to classify age groups take mutliple manually input by the user

I can modify the existing code to allow for multiple age inputs and classify each one using the nested if-elif-else conditionals.

The code now successfully takes multiple age inputs and classifies each one into age groups using nested if-elif-else statements.

What would you like to do next? You could:

- Store the classified ages and their categories.
- Count how many people fall into each age group.
- Validate the input further (e.g., ensure the input is within a reasonable age range).
- Integrate this age classification into a larger program or data analysis task.

What can I help you build?

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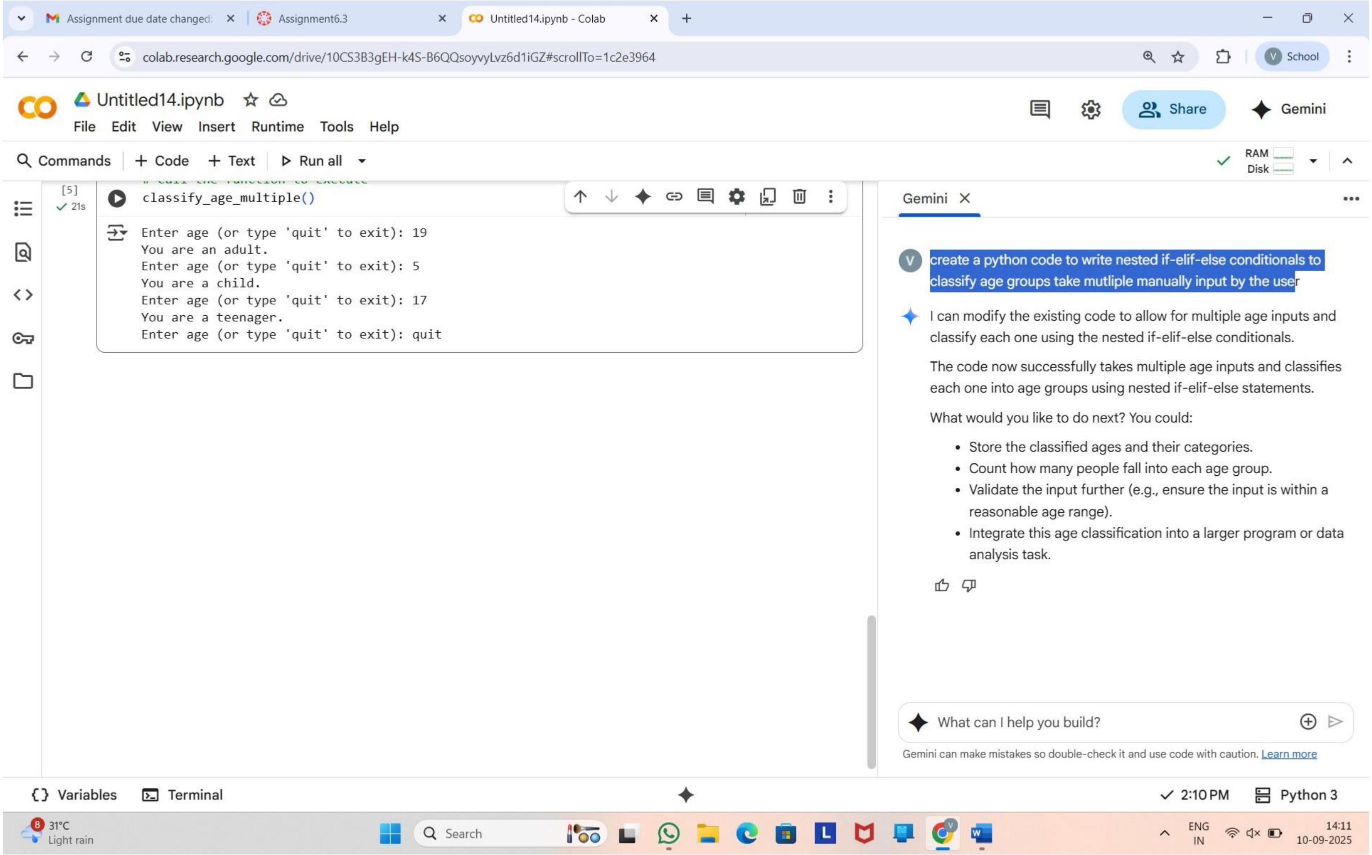

```
classify_age_multiple()
```

```
Enter age (or type 'quit' to exit): 19
You are an adult.
Enter age (or type 'quit' to exit): 5
You are a child.
Enter age (or type 'quit' to exit): 17
You are a teenager.
Enter age (or type 'quit' to exit): quit
```

Gemini

create a python code to write nested if-elif-else conditionals to classify age groups take mutliple manually input by the user

I can modify the existing code to allow for multiple age inputs and classify each one using the nested if-elif-else conditionals.

The code now successfully takes multiple age inputs and classifies each one into age groups using nested if-elif-else statements.

What would you like to do next? You could:

- Store the classified ages and their categories.
- Count how many people fall into each age group.
- Validate the input further (e.g., ensure the input is within a reasonable age range).
- Integrate this age classification into a larger program or data analysis task.

What can I help you build?

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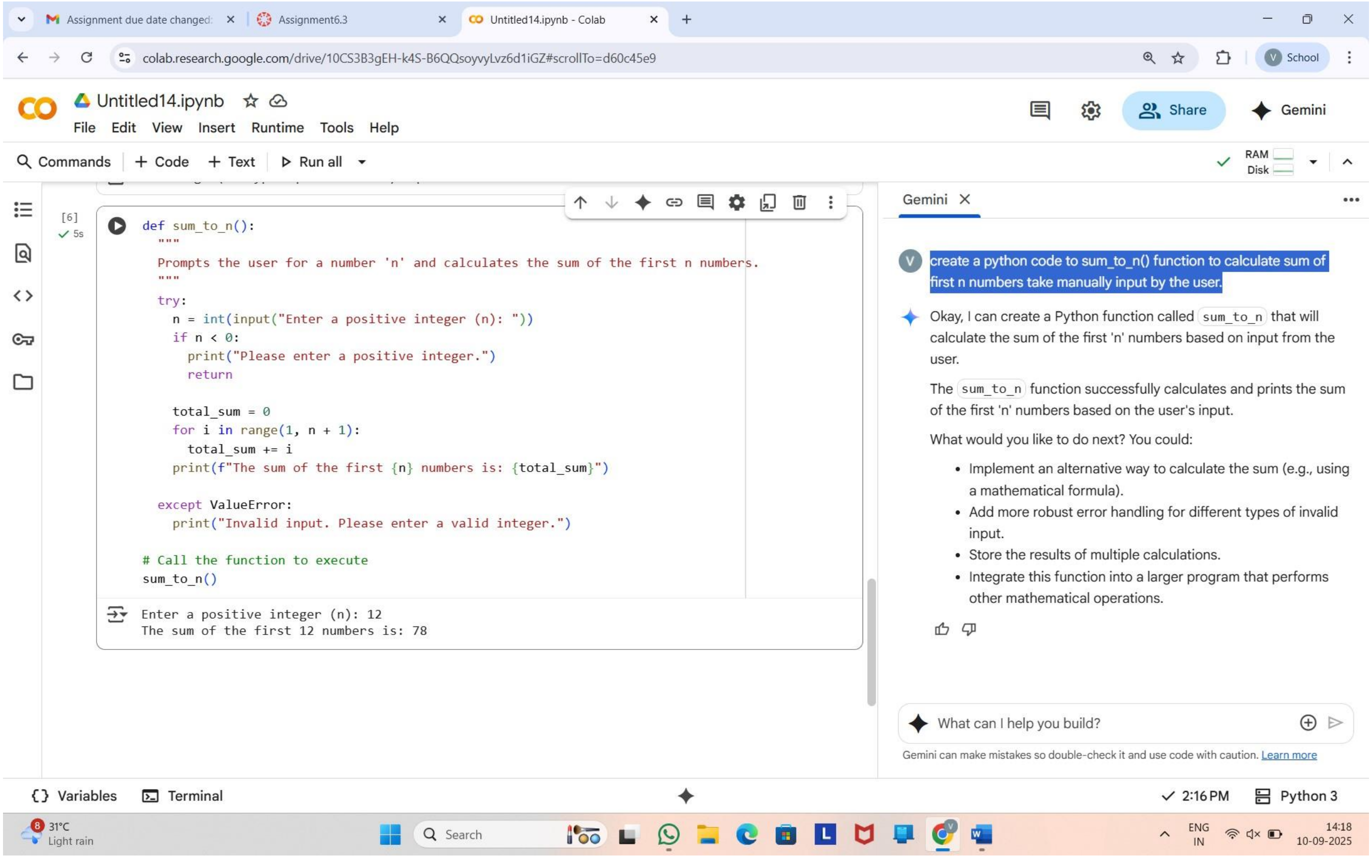
Observation: This task successfully demonstrates how to use a while loop to repeatedly take user input and apply nested if-elif-else conditions to classify each input. It also includes a mechanism for the user to exit the input loop.

Task-4:

Prompt: Create a python code to sum_to_n() function to calculate sum of first n numbers take manually input by the user.

Code&Output:



```python
def sum_to_n():
  """
  Prompts the user for a number 'n' and calculates the sum of the first n numbers.
  """
  try:
    n = int(input("Enter a positive integer (n): "))
    if n < 0:
      print("Please enter a positive integer.")
      return

    total_sum = 0
    for i in range(1, n + 1):
      total_sum += i
    print(f"The sum of the first {n} numbers is: {total_sum}")

  except ValueError:
    print("Invalid input. Please enter a valid integer.")

# Call the function to execute
sum_to_n()
```

```
Enter a positive integer (n): 12
The sum of the first 12 numbers is: 78
```

create a python code to sum_to_n() function to calculate sum of first n numbers take manually input by the user.

Okay, I can create a Python function called `sum_to_n` that will calculate the sum of the first 'n' numbers based on input from the user.

The `sum_to_n` function successfully calculates and prints the sum of the first 'n' numbers based on the user's input.

What would you like to do next? You could:

- Implement an alternative way to calculate the sum (e.g., using a mathematical formula).
- Add more robust error handling for different types of invalid input.
- Store the results of multiple calculations.
- Integrate this function into a larger program that performs other mathematical operations.

What can I help you build?

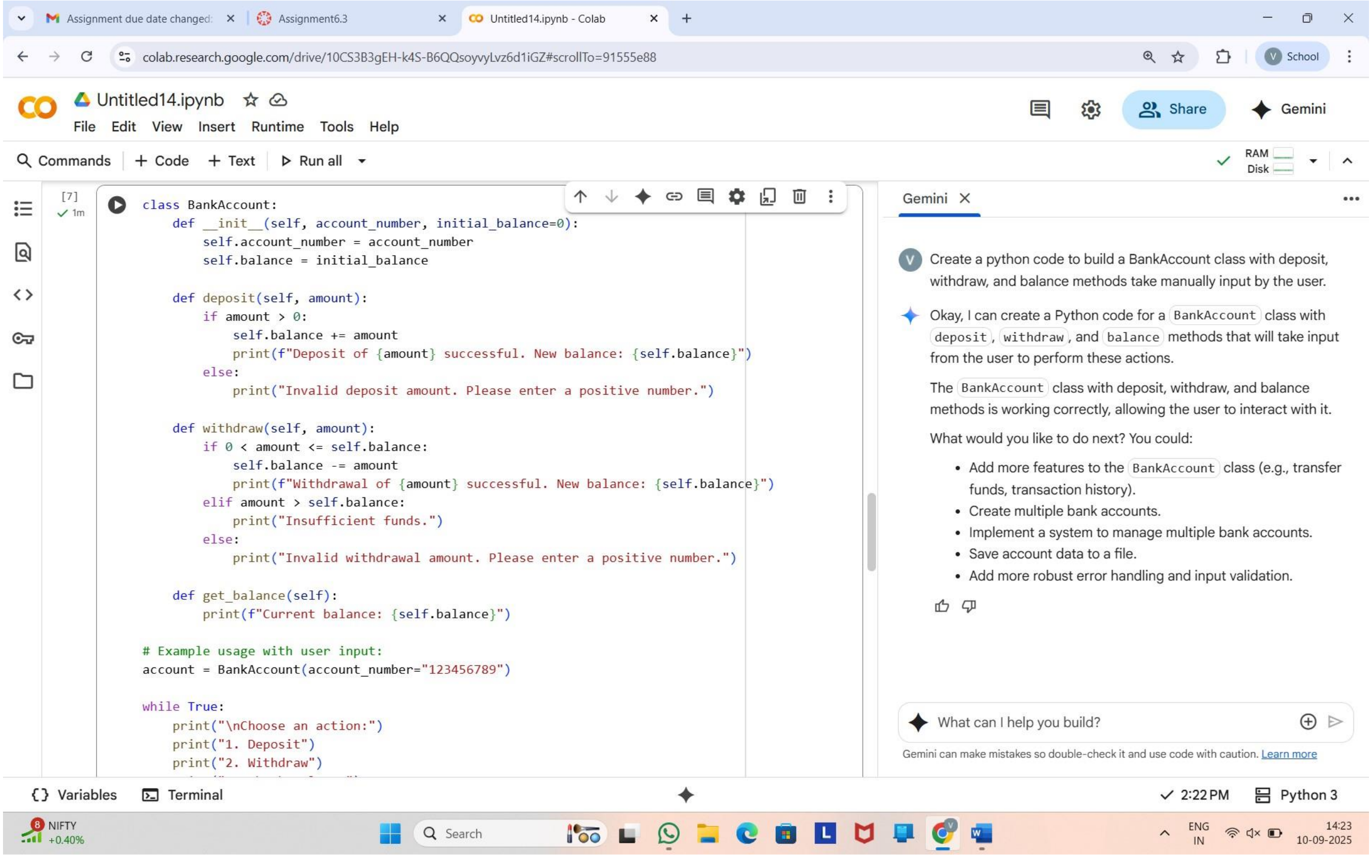
Gemini can make mistakes so double-check it and use code with caution. Learn more

Observation: This task successfully demonstrates how to define a Python function that takes user input, validates it, and uses a for loop to iterate and accumulate a sum. This is a common pattern for performing calculations over a range of numbers.

Task-5:

Prompt: Create a python code to build a BankAccount class with deposit, withdraw, and balance methods take manually input by the user.

Code&Output:


Assignment due date changed
Assignment6.3
Untitled14.ipynb - Colab
colab.research.google.com/drive/10CS3B3gEH-k4S-B6QQsoyvyLvz6d1iGZ#scrollTo=91555e88
Untitled14.ipynb
File Edit View Insert Runtime Tools Help
Share
Gemini
Commands + Code + Text Run all
RAM Disk
[7] 1m
Variables
Terminal
2:22 PM
Python 3
NIFTY +0.40%
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ENG IN
14:23 10-09-2025

```python
class BankAccount:
    def __init__(self, account_number, initial_balance=0):
        self.account_number = account_number
        self.balance = initial_balance

    def deposit(self, amount):
        if amount > 0:
            self.balance += amount
            print(f"Deposit of {amount} successful. New balance: {self.balance}")
        else:
            print("Invalid deposit amount. Please enter a positive number.")

    def withdraw(self, amount):
        if 0 < amount <= self.balance:
            self.balance -= amount
            print(f"Withdrawal of {amount} successful. New balance: {self.balance}")
        elif amount > self.balance:
            print("Insufficient funds.")
        else:
            print("Invalid withdrawal amount. Please enter a positive number.")

    def get_balance(self):
        print(f"Current balance: {self.balance}")

# Example usage with user input:
account = BankAccount(account_number="123456789")

while True:
    print("\nChoose an action:")
    print("1. Deposit")
    print("2. Withdraw")
```

Gemini

Create a python code to build a BankAccount class with deposit, withdraw, and balance methods take manually input by the user.

Okay, I can create a Python code for a `BankAccount` class with `deposit`, `withdraw`, and `balance` methods that will take input from the user to perform these actions.

The `BankAccount` class with deposit, withdraw, and balance methods is working correctly, allowing the user to interact with it.

What would you like to do next? You could:

- Add more features to the `BankAccount` class (e.g., transfer funds, transaction history).
- Create multiple bank accounts.
- Implement a system to manage multiple bank accounts.
- Save account data to a file.
- Add more robust error handling and input validation.

What can I help you build?

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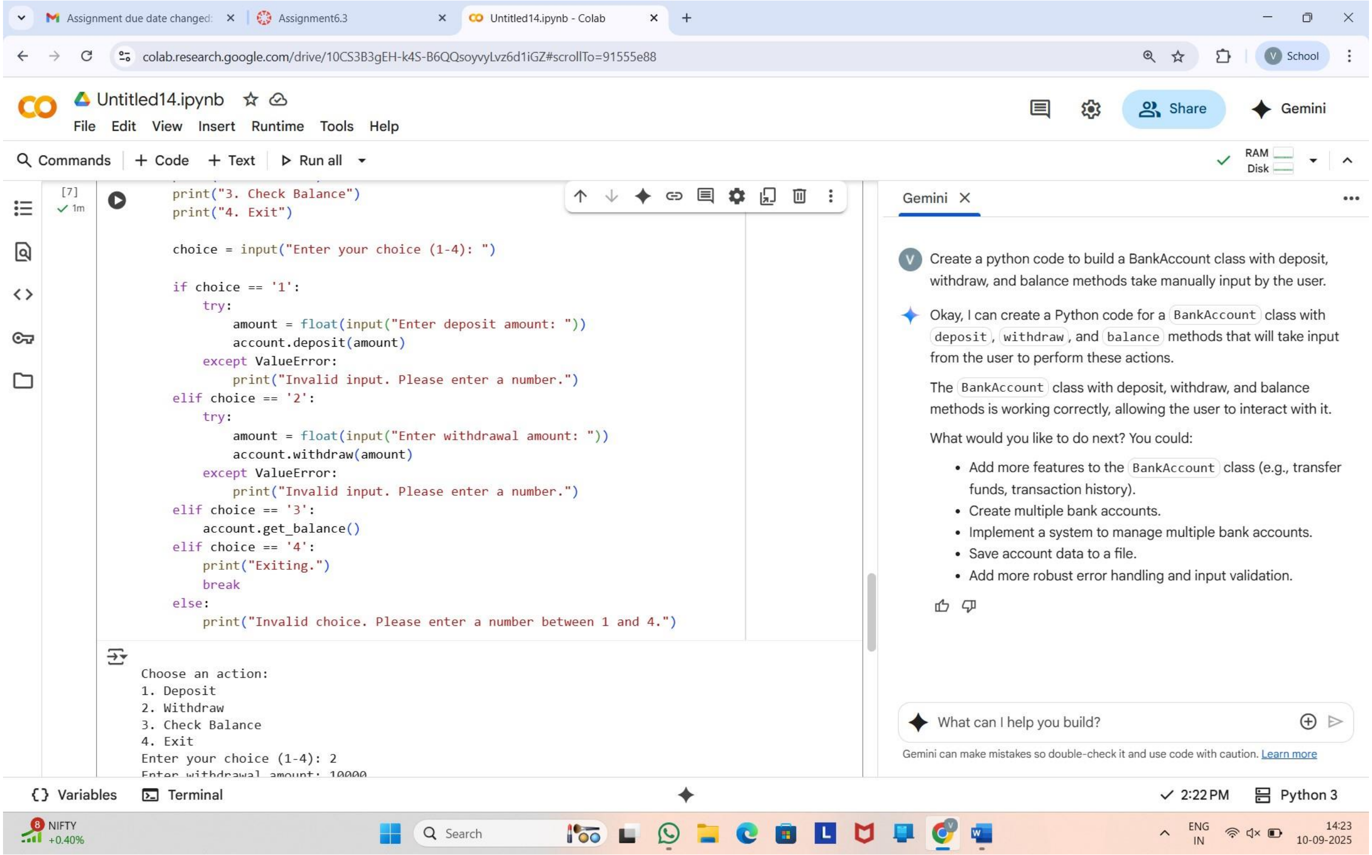
Assignment due date changed
Assignment6.3
Untitled14.ipynb - Colab
colab.research.google.com/drive/10CS3B3gEH-k4S-B6QQsoyvyLvz6d1iGZ#scrollTo=91555e88
Untitled14.ipynb
File Edit View Insert Runtime Tools Help
Share
Gemini
Commands + Code + Text Run all
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14:23 10-09-2025

```python
    print("3. Check Balance")
    print("4. Exit")

    choice = input("Enter your choice (1-4): ")

    if choice == '1':
        try:
            amount = float(input("Enter deposit amount: "))
            account.deposit(amount)
        except ValueError:
            print("Invalid input. Please enter a number.")
    elif choice == '2':
        try:
            amount = float(input("Enter withdrawal amount: "))
            account.withdraw(amount)
        except ValueError:
            print("Invalid input. Please enter a number.")
    elif choice == '3':
        account.get_balance()
    elif choice == '4':
        print("Exiting.")
        break
    else:
        print("Invalid choice. Please enter a number between 1 and 4.")
```

```
Choose an action:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Enter your choice (1-4): 2
Enter withdrawal amount: 10000
```

Gemini

Create a python code to build a BankAccount class with deposit, withdraw, and balance methods take manually input by the user.

Okay, I can create a Python code for a `BankAccount` class with `deposit`, `withdraw`, and `balance` methods that will take input from the user to perform these actions.

The `BankAccount` class with deposit, withdraw, and balance methods is working correctly, allowing the user to interact with it.

What would you like to do next? You could:

- Add more features to the `BankAccount` class (e.g., transfer funds, transaction history).
- Create multiple bank accounts.
- Implement a system to manage multiple bank accounts.
- Save account data to a file.
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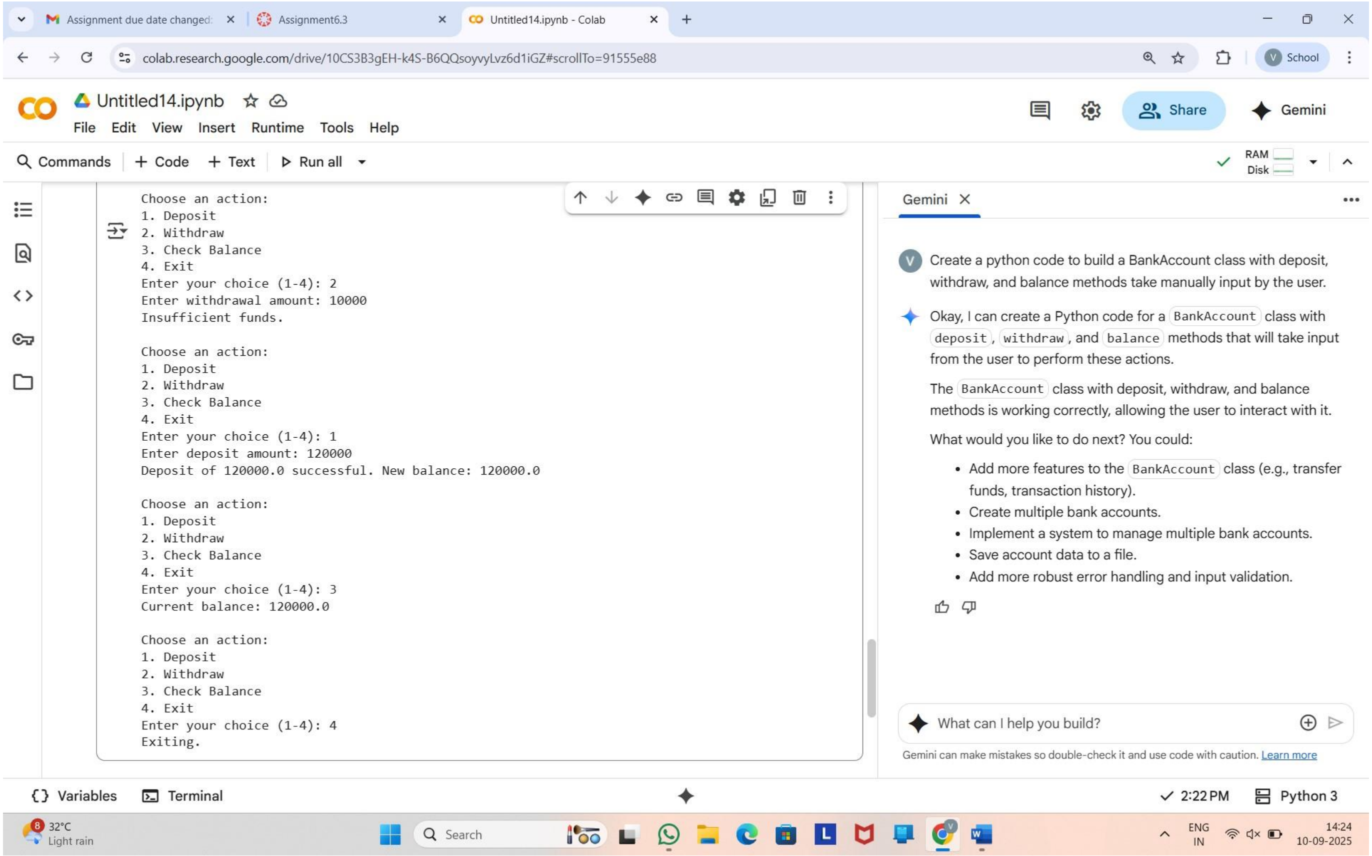

```
Choose an action:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Enter your choice (1-4): 2
Enter withdrawal amount: 10000
Insufficient funds.

Choose an action:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Enter your choice (1-4): 1
Enter deposit amount: 120000
Deposit of 120000.0 successful. New balance: 120000.0

Choose an action:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Enter your choice (1-4): 3
Current balance: 120000.0

Choose an action:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Enter your choice (1-4): 4
Exiting.
```

Gemini

Create a python code to build a BankAccount class with deposit, withdraw, and balance methods take manually input by the user.

Okay, I can create a Python code for a `BankAccount` class with `deposit`, `withdraw`, and `balance` methods that will take input from the user to perform these actions.

The `BankAccount` class with deposit, withdraw, and balance methods is working correctly, allowing the user to interact with it.

What would you like to do next? You could:

- Add more features to the `BankAccount` class (e.g., transfer funds, transaction history).
- Create multiple bank accounts.
- Implement a system to manage multiple bank accounts.
- Save account data to a file.
- Add more robust error handling and input validation.

What can I help you build?

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Observation: This task successfully demonstrates the creation of a Python class with multiple methods (deposit, withdraw, get_balance) that encapsulate data (balance) and behavior. It also incorporates a loop for continuous user interaction and basic error handling for invalid input, simulating a simple banking application.