

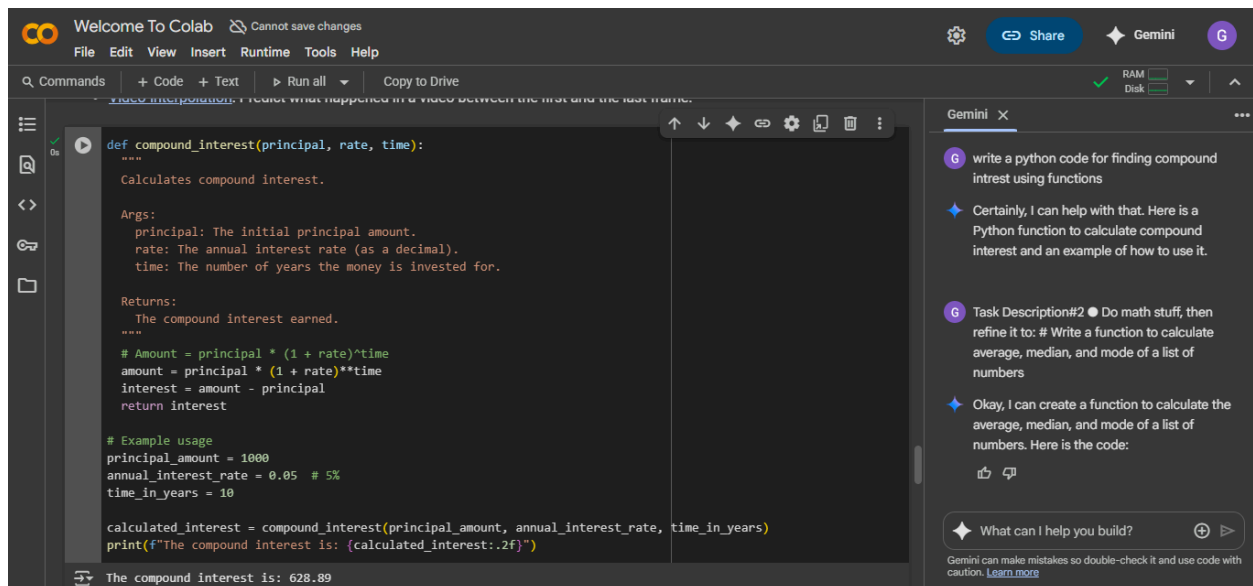
AI Assisted coding

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Task Description#1

-

Ask AI to write a function to calculate compound interest, starting with only the function name. Then add a docstring, then input-output example



The screenshot displays the Google Colab interface. The main code editor contains a Python function named `compound_interest` with a docstring and example usage. The function calculates compound interest based on principal, rate, and time. The output of the code execution is visible at the bottom: "The compound interest is: 628.89". On the right side, the Gemini AI chat interface is open, showing a conversation where the user asks for a Python function to calculate compound interest, and the AI provides the function and an example of its usage.

```
def compound_interest(principal, rate, time):  
    """  
    Calculates compound interest.  
  
    Args:  
        principal: The initial principal amount.  
        rate: The annual interest rate (as a decimal).  
        time: The number of years the money is invested for.  
  
    Returns:  
        The compound interest earned.  
    """  
    # Amount = principal * (1 + rate)^time  
    amount = principal * (1 + rate)**time  
    interest = amount - principal  
    return interest  
  
# Example usage  
principal_amount = 1000  
annual_interest_rate = 0.05 # 5%  
time_in_years = 10  
  
calculated_interest = compound_interest(principal_amount, annual_interest_rate, time_in_years)  
print(f"The compound interest is: {calculated_interest:.2f}")
```

The compound interest is: 628.89

Gemini chat history:

- write a python code for finding compound interest using functions
- Certainly, I can help with that. Here is a Python function to calculate compound interest and an example of how to use it.
- Task Description#2 • Do math stuff, then refine it to: # Write a function to calculate average, median, and mode of a list of numbers
- Okay, I can create a function to calculate the average, median, and mode of a list of numbers. Here is the code:

What can I help you build?

Task Description#2

-

Do math stuff, then refine it to: # Write a function to calculate average, median, and mode of a list of numbers

Welcome To Colab

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```
def calculate_stats(numbers):  
    """  
    Calculates the average, median, and mode of a list of numbers.  
    Args:  
        numbers: A list of numbers.  
    Returns:  
        A dictionary containing the average, median, and mode.  
    """  
    if not numbers:  
        return {"average": None, "median": None, "mode": None}  
  
    # Calculate average  
    average = sum(numbers) / len(numbers)  
  
    # Calculate median  
    sorted_numbers = sorted(numbers)  
    n = len(sorted_numbers)  
    mid = n // 2  
    if n % 2 == 0:  
        median = (sorted_numbers[mid - 1] + sorted_numbers[mid]) / 2  
    else:  
        median = sorted_numbers[mid]  
  
    # Calculate mode  
    data = Counter(numbers)  
    max_freq = max(data.values())  
    mode = [num for num, freq in data.items() if freq == max_freq]  
    # If every number appears the same number of times, there is no unique mode  
    if len(mode) == len(numbers):  
        mode = []  
  
    return {"average": average, "median": median, "mode": mode}  
  
# Example usage  
my_list = [1, 2, 3, 4, 5, 5, 6, 6, 7]  
stats = calculate_stats(my_list)  
print(stats)  
  
my_list_2 = [1, 2, 3, 4, 5]  
stats_2 = calculate_stats(my_list_2)  
print(stats_2)
```

{'average': 4.5, 'median': 5.0, 'mode': [6]}

Gemini X

write a python code for finding compound interest using functions

Certainly, I can help with that. Here is a Python function to calculate compound interest and an example of how to use it.

Task Description#2 Do math stuff, then refine it to: # Write a function to calculate average, median, and mode of a list of numbers

Okay, I can create a function to calculate the average, median, and mode of a list of numbers. Here is the code:

What can I help you build?

Gemini can make mistakes so double-check it and use code with caution. [Learn more](#)

Task Description#3



Provide multiple examples of input-output to the AI for `convert_to_binary(num)`

function. Observe how AI uses few-shot prompting to generalize.

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def convert_to_binary(num):
 """
 Converts an integer to its binary representation.

 Args:
 num: The integer to convert.

 Returns:
 A string representing the binary form of the integer.
 """
 return bin(num).replace("0b", "")

Example usage
decimal_number = 13
binary_representation = convert_to_binary(decimal_number)
print(f"The binary representation of {decimal_number} is: {binary_representation}")

decimal_number_2 = 5
binary_representation_2 = convert_to_binary(decimal_number_2)
print(f"The binary representation of {decimal_number_2} is: {binary_representation_2}")

Gemini

6

give me a python function that converts integer to binary

Absolutely! Here is a Python function that converts an integer to its binary representation.

What can I help you build?

Gemini can make mistakes so double-check it and use code with caution. [Learn more](#)