

EXAM : 1

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BATCH : 12

1).create a python function that converts an amount from one currency to another using exchange rates stored in a dictionary .Use Github copilot along with vs code.Use few short prompting

PROMPT:

#Input1: {'USD': 1, 'EUR': 0.9, 'INR': 75}.

#Output: converted amount.

#Input2: {'USD': 2 'EUR': 1.8, 'INR': 150}.

#Output2: converted amount

#Write a Python function that converts an amount from one currency to another

CODE:

```
def convert_currency(amount, from_currency, to_currency,  
exchange_rates):
```

```
    if from_currency not in exchange_rates or to_currency not in  
exchange_rates:
```

```
        raise ValueError("Currency not supported.")
```

```
    # Convert amount to USD first
```

```
    amount_in_usd = amount / exchange_rates[from_currency]
```

Convert USD to target currency#Input1: {'USD': 1, 'EUR': 0.9, 'INR': 75}.

#Output: converted amount.

#Input2: {'USD': 2 'EUR': 1.8, 'INR': 150}.

#Output2: converted amount

#Write a Python function that converts an amount from one currency to another.

```
def convert_currency(amount, from_currency, to_currency, exchange_rates):
```

```
    if from_currency not in exchange_rates or to_currency not in exchange_rates:
```

```
        raise ValueError("Currency not supported.")
```

```
    # Convert amount to USD first
```

```
    amount_in_usd = amount / exchange_rates[from_currency]
```

```
    # Convert USD to target currency
```

```
    converted_amount = amount_in_usd *  
exchange_rates[to_currency]
```

```
    return converted_amount
```

```
    converted_amount = amount_in_usd *  
exchange_rates[to_currency]
```

```
    return converted_amount
```

#Example usage:

```
exchange_rates1 = {'USD': 1, 'EUR': 0.9, 'INR': 75}
```

```
amount1 = 100
```

```
from_currency1 = 'EUR'
```

```
to_currency1 = 'INR'
```

```
converted_amount1 = convert_currency(amount1, from_currency1,  
to_currency1, exchange_rates1)
```

```
print(f"{amount1} {from_currency1} is equal to  
{converted_amount1:.2f} {to_currency1}")
```

```
exchange_rates2 = {'USD': 2, 'EUR': 1.8, 'INR': 150}
```

```
amount2 = 200
```

```
from_currency2 = 'EUR'
```

```
to_currency2 = 'INR'
```

```
converted_amount2 = convert_currency(amount2, from_currency2,  
to_currency2, exchange_rates2)
```

```
print(f"{amount2} {from_currency2} is equal to  
{converted_amount2:.2f} {to_currency2}")
```

OUTPUT:

100 EUR is equal to 8333.33 INR

200 EUR is equal to 16666.67 INR

2)Write a python program to extract all email address from a block of text using regular expressions.Github copilot along with vs code .use zero short prompting.

PROMPT:

Write a Python program to extract all email addresses from a block of text using regular expressions.

CODE:

```
def extract_emails(text):  
    # Regular expression pattern for matching email addresses  
    email_pattern = r'[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}'  
    # Find all email addresses in the text  
    emails = re.findall(email_pattern, text)  
    return emails  
  
if __name__ == "__main__":  
    sample_text = """  
    Hello, please contact us at support@example.com for further  
    information.  
  
    You can also reach out to john.doe123@gmail.com or jane-  
    doe@my-company.co.uk.  
  
    Don't forget our backup: info@domain.io."""  
    extracted_emails = extract_emails(sample_text)  
    print("Extracted email addresses:")  
    for email in extracted_emails:  
        print(email)
```

OUTPUT:

Extracted email addresses:

support@example.com

john.doe123@gmail.com

jane-doe@my-company.co.uk

info@domain.io

3) Given a list of movies with genres, write a python function that recommends movies based on user's preferred genre. Use the cursor AI tool. Use few shot prompting.

PROMPT:

#input1=bahhubali

#output1=action

#input2=Hi nanna

#output2=emotional

#generate a code of a function that takes a movie name as input and returns its genre as output.

CODE:

```
def get_movie_genre(movie_name):  
    movie_genres = {  
        "bahhubali": "action",  
        "Hi nanna": "emotional",  
        "Inception": "sci-fi",  
        "The Dark Knight": "action",  
    }  
    return movie_genres.get(movie_name, "unknown genre")  
  
def main():  
    movie1 = "bahhubali"  
    movie2 = "Hi nanna"  
    print(f"The genre of '{movie1}' is: {get_movie_genre(movie1)}")
```

```
print(f"The genre of '{movie2}' is: {get_movie_genre(movie2)}")  
if __name__ == "__main__":  
    main()
```

OUTPUT:

The genre of 'bahhubali' is: action

The genre of 'Hi nanna' is: emotional

4)Write a python code that reads a CSV file containing student names and marks in 3 subjects.Calculate the total and average marks for each student.Use cursor AI tool.

PROMPT:

Reads a CSV file containing student names and marks in 3 subjects

Calculates the total and average marks for each student prints the result

CODE:

```
import csv  
  
with open('students.csv', newline='') as csvfile:  
    reader = csv.DictReader(csvfile)  
    for row in reader:  
        name = row['Name']  
        marks = [int(row['Math']), int(row['Science']), int(row['English'])]  
        total = sum(marks)  
        average = total / len(marks)  
        print(f"{name}: Total = {total}, Average = {average:.2f}")
```

#sample example

Name,Math,Science,English

Alice,85,90,88

Bob,78,82,80

Charlie,92,88,95

OUTPUT:

Alice: Total = 263, Average = 87.67

Bob: Total = 240, Average = 80.00

Charlie: Total = 275, Average = 91.67