

GPTutor (🤖, 🤖)

A VS Code extension for
Smart Contract understanding

About Eason

- First-year PhD Student at Carnegie Mellon University
- Study Human-Computer Interaction
- Research:
 - AI in Education
 - Natural Language Processing
 - Blockchain and Smart Contract





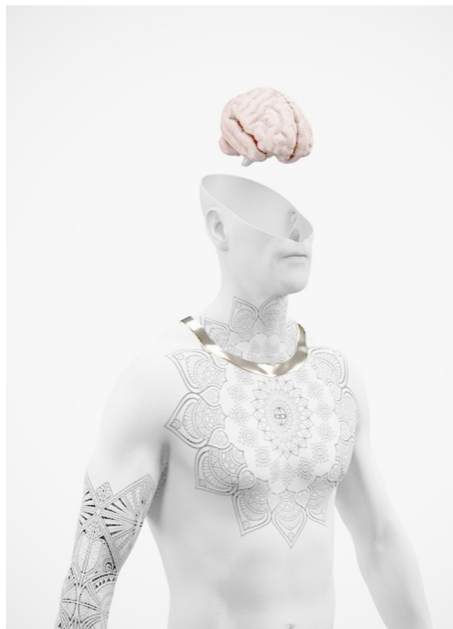
GPTutor x



Bucket Protocol



Eason



Justa



Ray

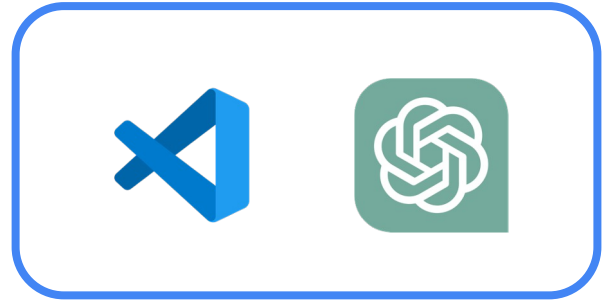
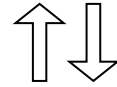


Pierce

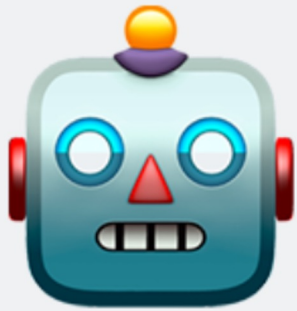
What is GPTutor?



Developer



GPTutor (🤖, 🤖)



GPTutor (🤖, 🤖)




1,316 installs

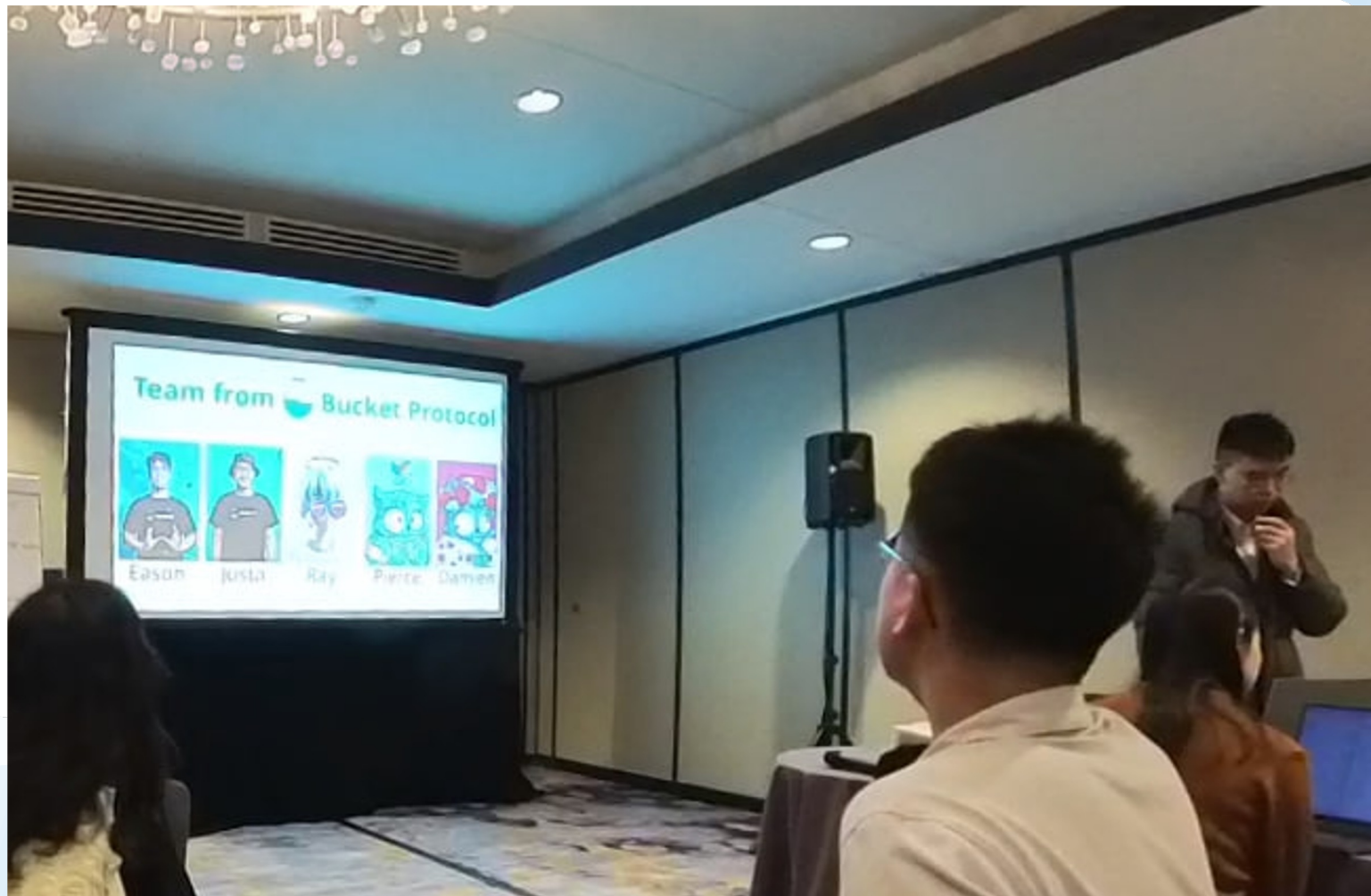


(2) | Free

A VS Code extension for AI Pair Programming and Smart Contract Development.

[Install](#)

[Trouble Installing?](#) 



AIED TOKYO 2023
24th INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE IN EDUCATION

The 24th International Conference on Artificial Intelligence in Education

July 3-7, 2023 in Tokyo, Japan



The screenshot shows a web browser window displaying the VS Code marketplace page for an extension named "GPTutor". The extension is described as "A VS Code extension for smart contract development". The page features a blue header with the extension name and two robot icons. Below the header, there is a description and a "Get it now" button. The browser's address bar shows the URL "https://openvscode.com/extensions/...". The VS Code interface is visible in the background, showing the "View" menu and the "Search" bar.

AIED TOKYO 2023

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July 3-7, 2023 in Tokyo, Japan

GP Tutor: a ChatGPT-powered programming tool for code explanation

Haohao Chen, Yixiang Tang, Hao-Chen Chen, Yun-Hsin Tseng, and Liang Li*
*liang.li@nycu.edu.tw

Contributions

- ChatGPT-powered programming tool for code explanation
- Source code based explanation for personal perspective explanation for code errors
- GP Tutor covers the most needed & accurate information in learning about specific code error
- GP Tutor provides a friendly user interface to interact with ChatGPT
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Natural Language Generation in a nutshell

GP Tutor (🤖, 🤖)

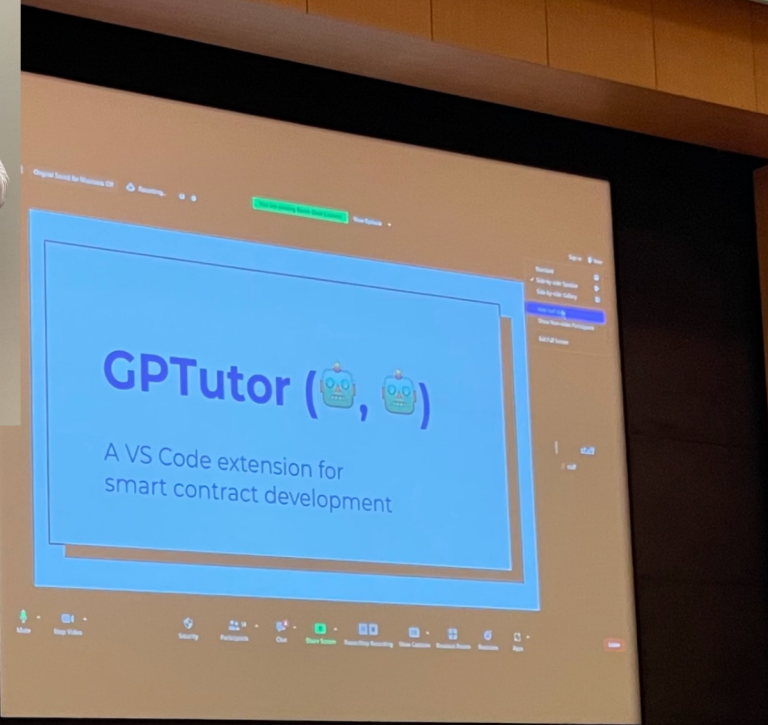
1. Install
2. Explain by GP

GP Tutor (🤖, 🤖)

1. Install
2. Explain by GP

GP Tutor (🤖, 🤖)

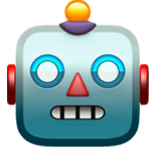
1. Install
2. Explain by GP





GPTutor: a ChatGPT-powered programming tool for code explanation

E Chen, R Huang, HS Chen, YH Tseng, LY Li
International Conference on Artificial Intelligence in Education, 2023



GPTutor

Support




Sui Move



GPTutor Workshop

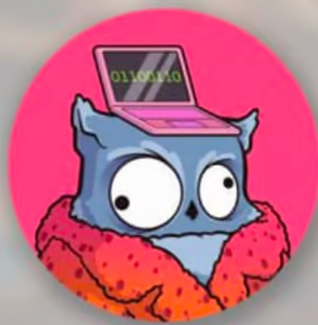
An AI tool to boost Sui-Move Development

 28 JUNE 2023 2:00 (UTC+0)



Eason Chen

Co-founder of GPTutor
AI Dev at Bucket Protocol



Justa

Tech Lead of Bucket Protocol
Advisor of GPTutor



Sam Blackshear

Co-founder & CTO of MystenLabs
Creator of Move

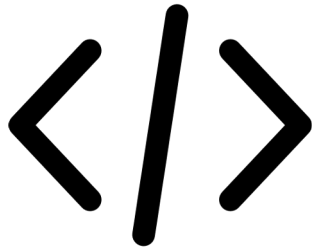
GPTutor Listed at Sui Move Developer Portal

GPTutor

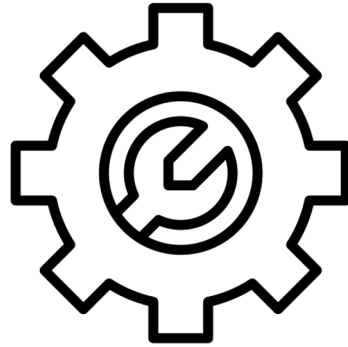
VS Code Extension supercharged by AI. Provides devs with code explanation and audits to more easily understand code. Build faster on Move.

Essential

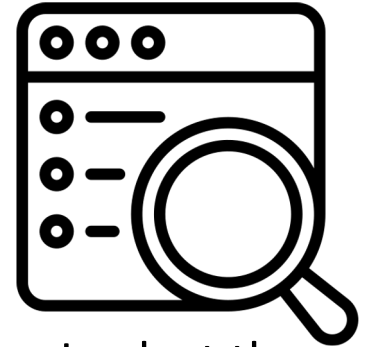
Why GPTutor?



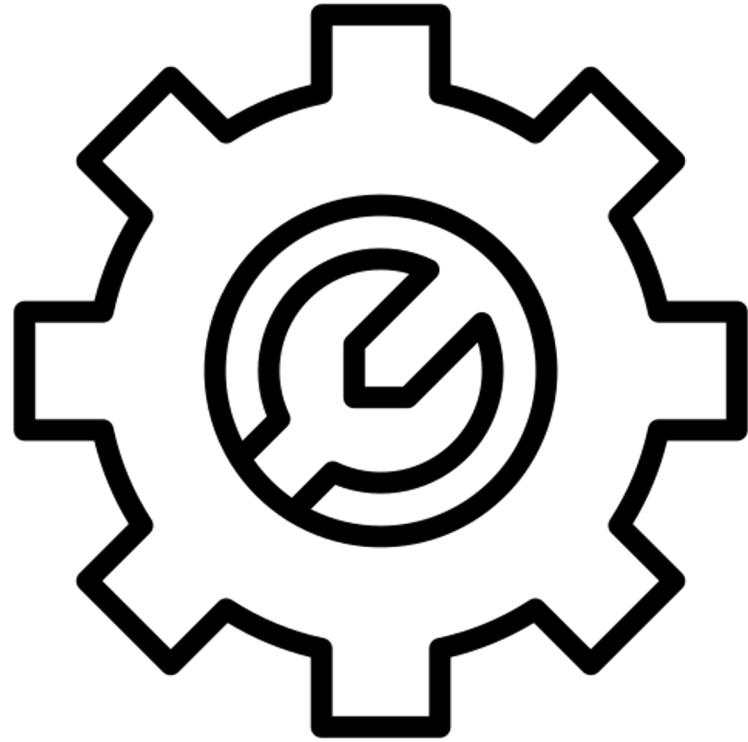
Open Source



Customizable



Look at the
Source Code



Customizable

A photograph of two men in a dark office environment looking at a large computer monitor. The monitor displays a code editor with multiple columns of code in a dark theme. One man, on the right, is pointing at the screen with his right hand. The man on the left is looking at the screen. The background is slightly blurred, showing other people and office equipment. The text 'AI Pair Programming' is overlaid at the bottom in a large, white, bold font.

AI Pair Programming

Programming



Programming with AI



Programming



Programming with AI



Programming with AI
at Library it don't know





幻覺

When you ask AI to handle
codes beyond its training data



Hallucination

Coindg with AI



Debug the code
generated by AI

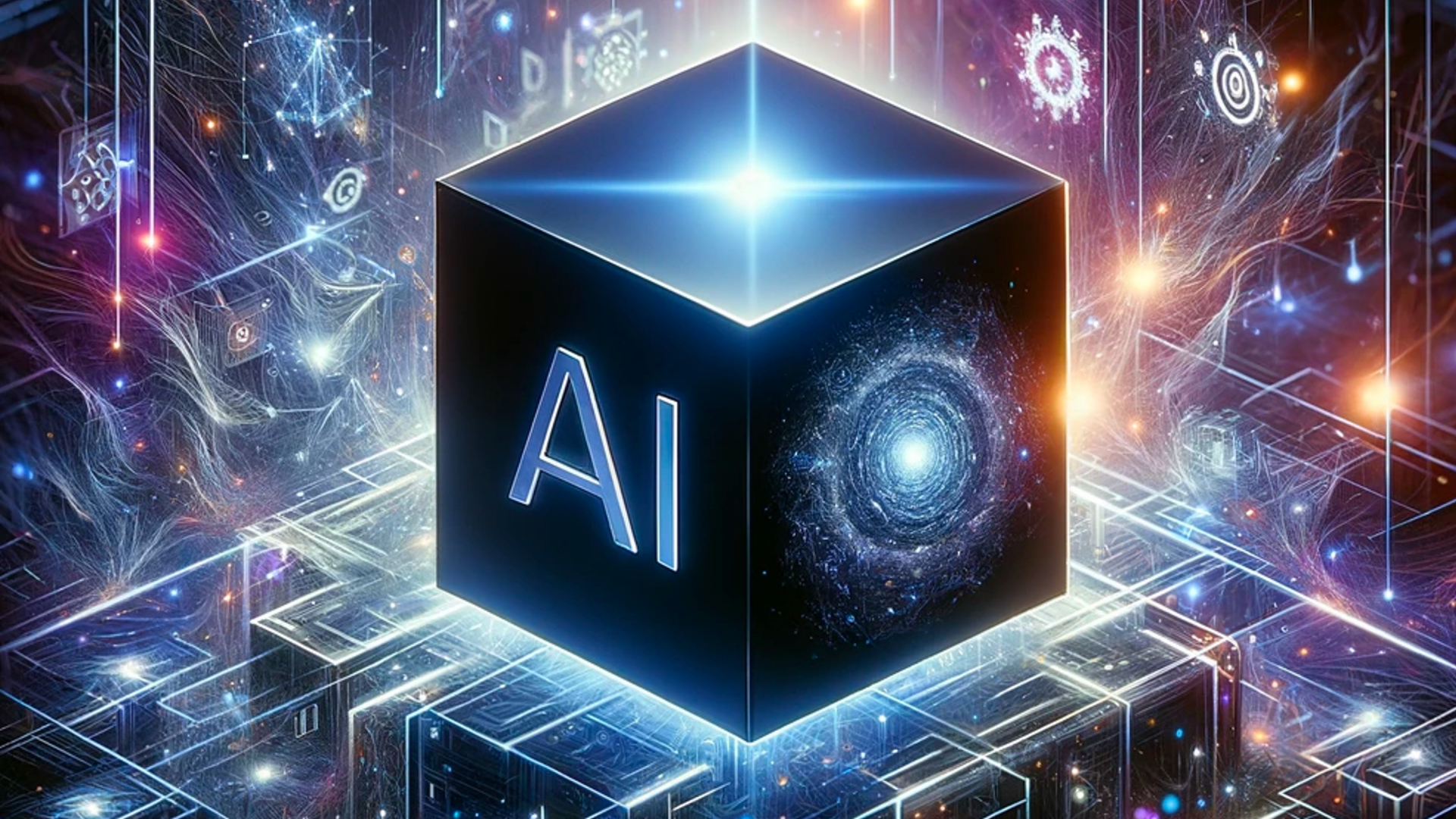




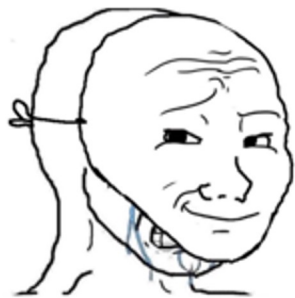
A man in a blue suit is sitting at a desk in a classroom, leaning forward and writing on a piece of paper with a blue pen. He is looking down at his work. In the background, other students are visible, some also working at their desks. The scene is lit with warm, indoor lighting.

Prompt

GPT

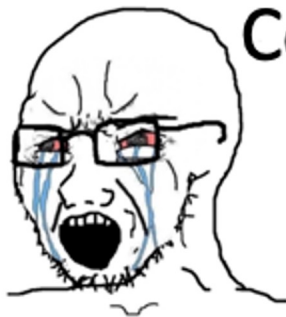


User



Can you learn
this library?

Copilot



NOOOO, I CAN'T DO IT

User

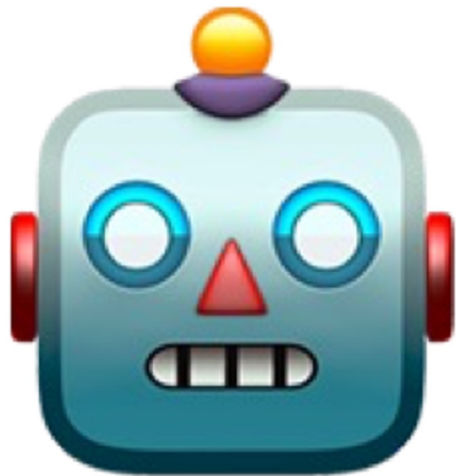


Can you learn
this library?

GPTutor



Yes I can. Just
give me the prompt



Demo

Features:

Accurate preprocessing allows users to get result more quickly and efficiently



Explain:

Help developers understand code content and logic



Comment:

Auto generated comments on the given code



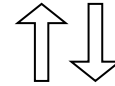
Review:

Check the given code for vulnerabilities, and give suggestions for improvement

More by your personalization



Developer






VSCode extension



ChatGPT

GPTutor (🤖, 🤖)


```
public fun released_amount<T>(lock: &Ves
    lock.released_amount
}
```




 Explain  Comment  Audit

```
public fun compute_vested_amount<T>(lock
    let total_balance = balance::value(&
    mul_factor(total_balance, timestamp_
}
```

Hover the code

```
public fun released_amount<T>(lock: &Ves  
    lock.released_amount
```

Click the pop up

 Explain  Comment  Audit

```
public fun compute_vested_amount<T>(lock  
    .. let total_balance = balance::value(&  
    .. mul_factor(total_balance, timestamp_
```




GPTUTOR

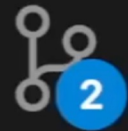
Settings ▼

English ▼


Answer:

Get Answer from GPTutor

Stop



The selected Move code contains a public function called `compute_vested_amount`. This function takes in two parameters, `lock` of type `&VestingLock<T>` and `timestamp_ms` of type `u64`. The function returns a value of type `u64`.



The purpose of this function is to compute the vested amount of tokens based on the passed in timestamp. Inside the function, the total balance available to be vested is calculated

Customize Prompt

Settings ▼

English ▼

Edit Prompt

Set Model ▶

Change Language ▶

Change API Key

is a public function called
s function takes in two
`lockingLock<T>` and
e function returns a value of

The purpose of this function is to compute the vested amount of tokens based on the passed in timestamp. Inside the function, the total balance available to be vested is calculated by adding the balance of the lock's `vault` to the lock's

```
"specificLanguage": {
```

```
  "move": {
```

```
    "explain": {
```

```
      "display_name": "🧑🏻‍💻 Explain",
```

```
      "type": "chatgpt-prompt"
```

```
      "prompt": [
```

```
        {
```

```
          "role": "system",
```

```
          "content": "Move is an open source language for writing safe contracts. It's format is similar to Rust. You are a Senior Developer \n I will provide some ${languageId} code, and it's your job to explain the ${languageId} code I selected."
```

```
        },
```

```
        {
```

```
          "role": "user",
```

```
          "content": "Other context about the selected code is in the"
```

Example:

Tailored to Sui-Move

這段程式碼定義了一個公開函式

`compute_vested_amount<T>(lock: &VestingLock<T>`,
這個函式用

Данный код на языке Move описывает функцию
`compute_vested_amount`, которая используется
для вычисления суммы денежных средств,
доступных

Le code Move sélectionné est une fonction publique
nommée "compute_vested_amount". Cette fonction
prend en paramètre une référence à une structure
appelée "VestingLock" et un entier non signé de

당 코드는 `compute_vested_amount` 함수로서, Vesting 계약
서 vested 되는 총 금액을 계산하는 함수입니다. 이 함수는 `lock` 인
자로 `VestingLock` 타입을 받고, `timestamp_ms` 인자로 시간(ms)

このMoveコードは、`VestingLock`構造体とタイムスタンプを
引数とする関数`compute_vested_amount`であり、以下の処
理を行っています。

`lock.vault`のバランスと`lock.released_amount`

这段代码是一个用于计算基于时间戳的锁定金额的函数，锁定期
间会按照一定比例释放资金。这个函数名为
`compute_vested_amount` 接收两个参数，

Support 100+ Languages

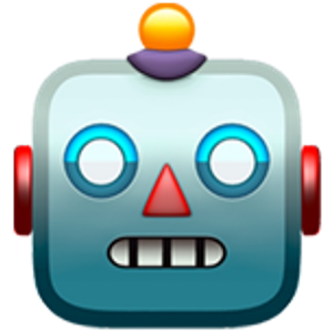
Seçilen Move kodu `compute_vested_amount<T>`
fonksiyonudur. Bu fonksiyon, `VestingLock` struct'ının
referansını ve bir zaman dam

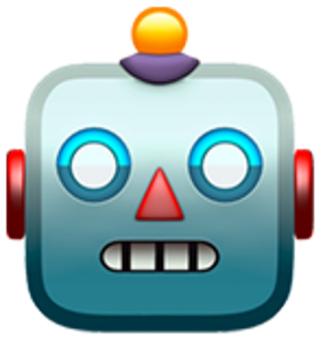
Deze Move code bevat een functie genaamd
`compute_vested_amount`, die berekent welk bedrag
aan tokens er op een bepaald tijdstip (uitgedrukt in
milliseconden) besch

Die ausgewählte Move-Code-Funktion
"compute_vested_amount" berechnet den Betrag, der
zu einem bestimmten Zeitpunkt von einem Vertrag mit
gesperrten Mitteln freigegeben werden soll. Dabei

El código seleccionado es una función llamada
`compute_vested_amount`, que toma dos argumentos:
un `lock` de tipo `VestingLock` y una marca de tiempo
en milisegundos llamada `timestamp_ms`. La

**Try GPTutor Yourself
at VS Code Right Now!**





Thank you

