CUSTOMIZE THE WALLET

DIGITAL WALLET

Time: 60 mins

Introduction

In this class, the student/s will learn to enhance the user experience by adding more features to the digital wallet such as adding account name, filter transactions, and change currency type.
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Recall Commands Used

● @app.routes('/example', methods=['GET', 'POST])	Route decorator used to handle GET & POST requests using flask in Python. It maps the specific URL with the associated function intended to perform some task.

Vocabulary

- **Conversion rate** is the ratio between two currencies, most commonly used in foreign exchange markets, which designates how much of one currency is needed to exchange for the equivalent value of another currency.
- **Transaction filters** allow you to filter the list of transactions matching specific criteria like: Transaction Source, Transaction Type, currency conversion and more.

Learning Objectives

Student/s should be able to:
- **Recall** the app routing technique and function definitions to perform a task.
- **Explain** how to convert the amount into different currency, and filter data using code.
- **Demonstrate** the renaming of the account address with a name in the wallet by updating and editing data in the database.

Activities

1. **Class Narrative:** *(3 mins)*

   - Brief the student/s that creating a positive user experience is essential for a successful product and one of the key elements is customization.

2. **Concept Introduction Activity:** *(4 mins)*

- Let the student/s undertake the explore-activity to observe how the features work on the wallet page using different buttons.

- Using the slides, explain that the student/s will learn:

    - to rename the account address

    - to convert the currency as per user need

    - to filter transactions as per user selection

3. **Activity 1: Rename the Account Address** *(14 mins)*

    Teacher Activity 1.1: *(7 mins)*

- Explain how the disadvantages of the hexadecimal account addresses and generate the need of renaming them.

- Explain how we will rename the account addresses by defining an app routing technique and function to store and print the account name and address.

    Student Activity 1.1: *(7 mins)*

- Guide the student/s to define an app route to fetch the account name and address and print it by defining a function.

    Teacher Activity 1.2: *(4 mins)*

- Explain that we will have to update the name in the database to restore it even after the sign out.

- Demonstrate how to update the name in the database for the account on the wallet page.

    Student Activity 1.2: *(4 mins)*

- Guide the student/s to write a function with address and account name as input parameters to update the database with account name for the input address and display it on the wallet page.

4. **Activity 2: Display Amount in Different Currency** *(12 mins)*

    Teacher Activity: *(6 mins)* .

- Recall creating app routes and defining functions to fetch currency type from a website.

- Explain how to convert the amount from Ether to Dollar using conversion rate for the account balance.

- Demonstrate how to convert and display the balance amount in the currency type selected by the user.

    Student Activity: *(6 mins)*

- Guide the student/s to convert the currency from Ether to Dollar and vice versa for all the transactions, and display it on the wallet.

5. **Activity 3: Filter the Transactions** *(12 mins)*

    Student Activity: *(6 mins)*

    ● Guide the students to globally access the filter using app route, store the relevant transactions based on the value of the filter, and display them on the wallet.

6. **Introduce the Post class project:** *(2 min)*

    ● Add the feature in the website Volts Mill admin webpage to change the currency type and display the balance in dollars.

7. **Test and Summarize the class learnings:** *(5 mins)*

    ● Check for understanding through quizzes and summarize learning after respective missions.

    ● Summarize the overall class learning towards the end of the class.

8. **Additional activities:**

    ● Encourage the student/s to add the account name while creating the account instead of renaming it later.

    ● Encourage the student/s to add a feature to delete the account name and show hexadecimal address for an account.

9. **State the Next Class Objective:** *(1 min)*

    ● In the next module, you will learn how computer devices connect with each other using the networking technology.

U.S. Standards:

CSTA: 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-19

Links Table		
Activity	**Activity Name**	**Link**
Class Presentation	Customize the Wallet	https://s3-whjr-curriculum-uploads.whjr.online/8b6ade35-a325-42d6-8235-d2f39fd41b5b.html
Explore Activity	Customize the Wallet	https://github.com/Tynker-Blockchain/TNK-M13-C104-SAS-BP

Teacher Activity 1.1	Rename the Account Address	https://github.com/Tynker-Blockchain/TNK-M13-C104-TAS-BP
Teacher Reference: Teacher Activity 1.1 Solution	Rename the Account Address	https://github.com/Tynker-Blockchain/TNK-M13-C104-TAS
Student Activity 1.1	Rename the Account Address	https://github.com/Tynker-Blockchain/TNK-M13-C104-SAS-BP
Teacher Reference: Student Activity 1.1 Solution	Rename the Account Address	https://github.com/Tynker-Blockchain/TNK-M13-C104-SAS
Teacher Activity 1.2	Rename the Account Address	https://github.com/Tynker-Blockchain/TNK-M13-C104-TAS-BP
Teacher Reference: Teacher Activity 1.2 Solution	Rename the Account Address	https://github.com/Tynker-Blockchain/TNK-M13-C104-TAS
Student Activity 1.2	Rename the Account Address	https://github.com/Tynker-Blockchain/TNK-M13-C104-SAS-BP
Teacher Reference: Student Activity 1.2 Solution	Rename the Account Address	https://github.com/Tynker-Blockchain/TNK-M13-C104-SAS
Teacher Activity 2	**Display Amount in Different Currency**	https://github.com/Tynker-Blockchain/TNK-M13-C104-TAS-BP
Teacher Reference: Teacher Activity 2 Solution	Convert the Currency	https://github.com/Tynker-Blockchain/TNK-M13-C104-TAS
Student Activity 2	Convert the Currency	https://github.com/Tynker-Blockchain/TNK-M13-C104-SAS-BP
Teacher Reference: Student Activity 2 Solution	Convert the Currency	https://github.com/Tynker-Blockchain/TNK-M13-C104-SAS
Student Activity 3	Filter the Transactions	https://github.com/Tynker-Blockchain/TNK-M13-C104-SAS-BP
Teacher Reference: Student Activity 3 Solution	Filter the Transactions	https://github.com/Tynker-Blockchain/TNK-M13-C104-SAS
Student's Additional Activity 1	Add the Account Name	https://github.com/Tynker-Blockchain/TNK-M13-C104-SAS-BP
Teacher Reference: Student's Additional Activity 1 Solution	Add the Account Name	https://github.com/Tynker-Blockchain/TNK-M13-C104-SAS
Student's Additional Activity 2	Delete the Account Name	https://github.com/Tynker-Blockchain/TNK-M13-C104-SAS-BP
Teacher Reference: Student's Additional Activity 2 Solution	Delete the Account Name	https://github.com/Tynker-Blockchain/TNK-M13-C104-SAS
Post Class Project	Change the Currency	https://github.com/Tynker-Blockchain/TNK-M13-C104-PCP-BP
Teacher Reference: Post Class	Change the Currency	https://github.com/Tynker-Blockchain/T

Project Solution		NK-M13-C104-PCP