

# Currency Converter

## Step 1

Write a program that prompts the user to enter the number of pennies, nickels, dimes, and quarters currently in his or her possession. Use these values to calculate the total amount of money in dollars and cents (no decimal point). To calculate the dollar and cent values you will first need to calculate the total number of cents.

Here is the formula:

$$\text{Total Cents} = \text{Number of Quarters} \times 25 + \text{Number of Dimes} \times 10 + \text{Number of Nickels} \times 5 + \text{Number of Pennies}$$

Once you have calculated the total number of cents you can then extract the dollar and cent amounts from the total cents by using the division and remainder operators.

To do this use the following formulas:

$$\text{Dollars} = \text{Total Cents} / 100$$

$$\text{Cents} = \text{Total Cents} \% 100$$

As an example, suppose the total cents equals 240 cents. When you use the division operator to divide 240 by 100 you get 2, the dollar amount. Recall that when you divide two integer values Java performs integer division which results in an integer answer. When you use the remainder operator to calculate the remainder you get 40, the cents amount. This gives you a result of 2 dollars and 40 cents.

You will need to declare the following variables in your program:

```
int quarters = 0;          // number of quarters
int dimes = 0;              // number of dimes
int nickels = 0;            // number of nickels
int pennies = 0;            // number of pennies
int totalCents = 0;          // total cents collected
int dollars = 0;             // dollar amount
int cents = 0;               // cents amount
```

## Step 2

Give a menu to the user to select the currency:

- 1: USD
- 2: EUR
- 3: GBP
- 4: TL
- 5: CAD
- 6: SAR

Get the current rates from <http://www.xe.com/> for calculation.

Write the exchange rate with a prompt to the user.

Sample Run

How many quarters do you have:

40

How many dimes do you have:

30

How many nickels do you have:

55

How many pennies do you have:

120

Total value: 16 dollars and 95 cents.

Enter the number on the left of the requested currency

1: USD

2: EUR

3: GBP

4: TL

5: CAD

6: SAR

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