

Assignment 3a: 10 points

Write a Program: Cryptocurrency Converter

Your goal is to write a program that asks the user for a whole number of dollars to convert into two cryptocurrencies: Bitcoin and Ethereum. You will store the conversion factors in the constants **BTC_PER_DOLLAR** and **ETH_PER_DOLLAR** (BTC and ETH are the currency codes for Bitcoin and Ethereum). Use the following formulas for calculating the exchange rates:

1 dollar = .000021 Bitcoin

1 dollar = .00028 Ethereum

Format your currency amounts in **fixed-point notation, with three decimals of precision, and be sure that the decimal point is always displayed.**

Your program should have the following:

- A comment header with your name, date, and a description of the program (1 point)
- Constants to hold the conversion factors with the given rates (2 points)
- A variable to hold the number of dollars to convert (1 point)
- Formatted output as described in the requirements that calculates the resulting amount of Bitcoin and Ethereum and displays that to the user (use the example output to guide your code. Remember, never type actual numbers into the cout statements when you have variables for those values!) (4 points)
- Demonstrate your program by testing it with the value of 1000 dollars (2 points) NOTE: Be sure to test with values other than 1000 but use 1000 when you submit your results for the assignment.

Example Output:

```
Please enter a dollar amount to convert into Bitcoin and Ethereum
1000
```

```
Using the conversion rates of 2.1e-05 Bitcoin per dollar and 0.00028
Ethereum per dollar:
```

```
1000 dollars = 0.021 Bitcoin.
1000 dollars = 0.280 Ethereum.
```