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CISC 3140

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Lab 7

Version

The version I used is MIT/GNU Scheme via DrRacket on Ubuntu. The standard I used is R5Rs.

Description

The problem I decided to work on is converting between currencies with exchange rates. My inputs were the currency I wanted to convert from and the exchange rate. I decided to input exchange rate because they are constantly changing. My outputs were the currency I wanted to get converted from the initial currency. Inputs included exchangerate, dollars, euros, and pounds.

Solution

To get my solutions, I first inputted the currency amount I needed to be converted and inputted the exchange rate. I would multiply both variables as a formula to output the converted currency.

References

https://icem.folkwang-uni.de/~finnendahl/cm_kurse/doc/schintro/schintro_102.html

<https://www.youtube.com/watch?v=AqBxU-Zmx00&t=459s>

Source code

```
'(Enter dollar amount to convert to euro)
```

```
(define dollar (read))
```

```
'(Enter exchange rate)
```

```
(define exchangerate (read))
```

```
'(dollar =)
```

```
(display dollar)(newline)
```

```
'(Exchange Rate =)
```

```
(display exchangerate)(newline)
```

```
'(dollar to euro is =)
```

```
(* dollar exchangerate)
```

```
'-----
```

```

'(Enter euro amount to convert to dollar)
(define euro (read))
'(Enter exchange rate)
(define exchangerate (read))
'(euro =)
(display euro)(newline)
'(Exchange Rate =)
(display exchangerate)(newline)
'(euro to dollar is =)
(* euro exchangerate)
'-----

'(Enter dollar amount to convert to pound sterling)
(define dollar (read))
'(Enter exchange rate)
(define exchangerate (read))
'(dollar =)
(display dollar)(newline)
'(Exchange Rate =)
(display exchangerate)(newline)
'(dollar to pound is =)
(* dollar exchangerate)
'-----

'(Enter pound amount to convert to dollar)
(define pound (read))
'(Enter exchange rate)
(define exchangerate (read))
'(pound =)
(display pound)(newline)
'(Exchange Rate =)
(display exchangerate)(newline)

```

'(pound to dollar is =)

(* pound exchangerate)

Output

```
Welcome to DrRacket, version 7.2 [3m].  
Language: R5RS; memory limit: 128 MB.  
(enter dollar amount to convert to euro)  
100  
(enter exchange rate)  
0.85  
(dollar =)  
100  
(exchange rate =)  
0.85  
(dollar to euro is =)  
85.0
```

```
-----  
(enter euro amount to convert to dollar)  
50  
(enter exchange rate)  
1.18  
(euro =)  
50  
(exchange rate =)  
1.18  
(euro to dollar is =)  
59.0
```

```
-----  
(enter dollar amount to convert to pound sterling)  
75  
(enter exchange rate)  
0.72  
(dollar =)  
75  
(exchange rate =)  
0.72  
(dollar to pound is =)  
54.0
```

```
-----  
(enter pound amount to convert to dollar)  
90  
(enter exchange rate)  
1.38  
(pound =)  
90  
(exchange rate =)  
1.38  
(pound to dollar is =)  
124.19999999999999
```