Swinburne University of Technology

2021 Sem 1 Introduction to Programming

Doubtfire Submission

Bill Total

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2021/03/04 10:27

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March 4, 2021

```ruby
def main()
    puts('please enter the appetizer price:')
    appetizer_price = gets.chomp.to_f()

    puts('please enter the main price:')
    main_price = gets.chomp.to_f()

    puts ('enter the dessert price:')
    dessert_price = gets.chomp.to_f()

    total_price = appetizer_price + main_price + dessert_price
    print('the total price is: $')
    printf("%.2f", total_price)
    print("\n")
end

main()
```

1.2T.rb

```ruby
def main()
    puts('please enter the appetizer price:')
    appetizer_price = gets.chomp.to_f()

    puts('please enter the main price:')
    main_price = gets.chomp.to_f()

    puts ('enter the dessert price:')
    dessert_price = gets.chomp.to_f()

    total_price = appetizer_price + main_price + dessert_price
    print('the total price is: $')
    printf("%.2f", total_price)
    print("\n")
end

main()
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL 2: powershell

```
PS D:\COS10009\CODE\LAB1> ruby 1.2T.rb
enter the appetizer price:
40
enter the main price:
40
enter the dessert price:
70
$150.00
PS D:\COS10009\CODE\LAB1> ruby 1.2T.rb
enter the appetizer price:
12.4
enter the main price:
41
enter the dessert price:
9.8
the total price is: $63.20
PS D:\COS10009\CODE\LAB1>
```

Answers to Questions from TT1.2

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1. Desk Check Task: Calculate Bill Total

Required Variables:

Integer: appetizer_price, main_price, dessert_price

Real (floating point): total_price

Pseudocode:

Read the value of appetizer_price

Read the value of main_price

Read the value of dessert_price

total_price = appetizer_price + main_price + dessert_price

Print '$' then the value of total_price to the terminal showing two decimal places.

Test Data:

	First data set	Second data set
appetizer_price	10.30	12.40
main_price	34.00	41.00
dessert_price	8.50	9.80

Expected Result:

	First data set	Second data set
Output:	$52.80	$63.20

Desk check - fill this in by completing the missing code in **bill_total.rb** (in the tasks Resources folder) then running it with the test data above:

	Statement	*appetizer_price*	*main_price*	*dessert_price*	*total_price*	*output*
First Pass	*Read the value of appetizer_price*	*10.30*				
	Read the value of main_price		*34.00*			
	Read the value of dessert_price			*8.50*		
	Calculate the total_price				*52.80*	
	Output the unit (dollars)					*$*
	Output the total_price					*52.80*
Second Pass	*Read the value of appetizer_price*	*12.4*				
	Read the value of main_price		*41*			
	Read the value of dessert_price			*9.8*		
	Calculate the total_price				*63.20*	
	Output the unit (dollars)					*$*
	Output the total_price					*63.20*

2. Short Answer Questions:

3.

Focus in the following on using the correct computing terminology.

Here are some terms that may help you: Assignment, evaluate, increment,

1. Using a few sentences explain why it may be important to execute statements in the correct sequence. (eg: what might happen if the last statement in Program 2 was executed earlier)

Because the variable haven't been defined so the that last line will be error

2: The code main_price = 10 is an example of which kind of programming statement?

This is an ???? statement.

3: What actions does the computer perform when it executes `a = a + b`?

The computer will calculate the sum a
Then a value will be updated

4: How would the value of variable i change in the statement i = i + 1?

The value of i will be increased by 1

5: *What sort of types will Ruby use to store the following variables* (given the associated variable values)?

String, float, integer Boolean

1: *What sort of types will Ruby use to store the following variables* (given the associated variable values)?

Data	Type
Number of students in a class e.g: 23	Integer
Average age of a group of people e.g: 23.5	Float
A temperature in Celsius e.g: 45.7	Float
True or false e.g: 1 == 2	Boolean

2. *Variables have a scope – what are two different scopes variables can have in Ruby?*

1) local- the variable is inside the function, which can be only used inside that functio

2) global- the variable is defined outside the main function

See the lesson materials for help with these questions. You could also see:

https://www.tutorialspoint.com/ruby/ruby_variables.htm