# Answers to Questions from TT1.2

Name:

Student ID:

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* ***(in cents)***

## ***Read the value of*** *main\_price* ***(in cents)***

## ***Read the value of*** *dessert\_price* ***(in cents)***

## *total\_price = appetizer\_price + main\_price + dessert\_price*

## *total\_price = total\_price / 100* **#Comment: convert to dollars**

## ***Print ‘$’ then the value of*** *total\_price* ***to the terminal showing two decimal places.***

## Test Data:

|  |  |  |
| --- | --- | --- |
|  | First data set | Second data set |
| *appetizer\_price* | 1030 | 1240 |
| *main\_price* | 3400 | 4100 |
| *dessert\_price* | 850 | 980 |

## Expected Result:

|  |  |  |
| --- | --- | --- |
|  | First data set | Second data set |
| *Output:* | $52.80 | $63.20 |

## Desk check:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Statement | *appetizer**\_price* | *main**\_price* | *dessert**\_price* | *total**\_price* | *output* |
| ***First Pass*** | ***Read the value of*** *appetizer\_price* | ***1030*** |  |  |  |  |
| ***Read the value of*** *main\_price* |  | ***3400*** |  |  |  |
| ***Read the value of*** *dessert\_price* |  |  | ***850*** |  |  |
| ***Calculate the*** *total\_price* |  |  |  | ***5280*** |  |
| ***Convert to dollars*** |  |  |  | ***52.80*** |  |
| ***Output the*** *total\_price* |  |  |  |  | ***$52.80*** |
| ***Second Pass*** | ***Read the value of*** *appetizer\_price* | ***1240*** |  |  |  |  |
| ***Read the value of*** *main\_price* |  | ***4100*** |  |  |  |
| ***Read the value of*** *dessert\_price* |  |  | ***980*** |  |  |
| ***Calculate the*** *total\_price* |  |  |  | ***6320*** |  |
| ***Convert to dollars*** |  |  |  | ***63.20*** |  |
| ***Output the*** *total\_price* |  |  |  |  | ***$63.20*** |

1. **Short Answer Questions:**

**Focus in the following on using the correct computing terminology.**

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

## 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)

It is crucial that statements are executed in the correct sequence, if not the program will produce incorrect results. It is vital that the statement that is ran in the correct sequence so that it can produce correct results.

## 2: The code **main\_price = 10** is an example of which kind of programming statement?

This is a assignment statement.

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

The computer first adds the variable ‘’a” and the variable “b” together.

Then it stores the result in the variable “a”

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

The value of i will be = (i+1)

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

|  |  |  |
| --- | --- | --- |
|  | **Data** | **Type** |
|  | A person's name e.g: “Fred Smith” | String |
|  | Number of students in a class e.g: 23 | Integer |
|  | Average age of a group of people e.g: 23.5 | Floating Point |
|  | A temperature in Celsius e.g: 45.7 | Floating Point |
|  | True or false e.g: 1 == 2 | Boolean |

Note: possible types include: Integer, String, Float, Boolean

## 6: ***Variables have a scope – what are two different scopes variables can have in Ruby?***

The scope of a variable is where it is accessible in relation to the program. A variable can be declared with the use of special characters which change the scope of a variable. The five variable scops are; global, instance, local, constant and class.