1. You are given a tuple of some tuples which contain information: each nested tuple contains a name (string), age (whole number) and the answer to the statement: I am a student (true/ false). Your job is to write a python program that extracts the information and stores it in a tuple in a more logical manner.

[CO4, CO6]

[10 marks]

**Given Input 1:**

((5, “ZA”, True), (“WA”, 9, False), (True, “Robin”, 1))

**Sample Output 1:**

Student tuple: ((“ZA”, 5), (“Robin”, 1))

Non-Student tuple: ((“WA”, 9))

**Given Input 2:**

((5, “ZA”, True), (True, “Robin”, 1))

**Sample Output 2:**

Student tuple: ((“ZA”, 5), (“Robin”, 1))

Non-Student tuple: ()

2. Trace the following code:

| **1** | **dict1 = {'a':9 , 'b':-2 , 'c':5 , 'd':-1 }** |
| --- | --- |
| **2** | **for i in dict1:** |
| **3** | **j = 0** |
| **4** | **k = 22** |
| **5** | **while j < 2:** |
| **6** | **if j % 2 == 0:** |
| **7** | **k = (8 + k % 6) / 3** |
| **8** | **dict1[i] = dict1[i]+ int(k)** |
| **9** | **else:** |
| **10** | **k = (6 - k % 8) \* 3** |
| **11** | **dict1[i] = dict1[i] - int(k)** |
| **12** | **j += 1** |
| **13** | **print(int(k))** |
| **14** | **print(i + " -> " + str(dict1[i]))** |

| **Output** |
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