COMP 1405B1 (Tuesday)
Introduction to Computer Science I
Midterm #1 – October 1st, 2019

Part 1 [10 marks total, 2 marks each]

Answers for Part 1 questions do not require a lot of detail. You just need to demonstrate that you understand the concepts. **You should enter your answers to the Part 1 questions in the part1.txt file**.

1.1 What is a variable?
1.2 What is a boolean expression? Give an example.
1.3 What does the assignment statement do? Give a small example.
1.4 Give 3 examples of types of data that we have seen in class so far.
1.5 Why is indentation important in Python? What purpose does it serve?

Part 2 [10 marks total, 5 marks each]

Answers for Part 2 require you to show all of your work. Answers that do not show the work involved will receive a mark of 0. **You should enter your answers to the Part 2 questions in the part2.txt file**.

2.1 Convert the decimal number 193 to binary.
2.2 Convert the binary number 0b1001101 to decimal.

Part 3 [10 marks]

Write the code for this part in the part3.py file. Write a program that asks the user to specify “yes” or “no” for the following two questions:

1. Is there a test tomorrow?
2. Is it past midnight?

After the user answers these two questions, the program must then print out what a student should do: “study”, “game”, or “sleep”. The student should study if there is a test tomorrow. If there is no test tomorrow, the student should game if it is before midnight and sleep if it is after midnight. You can assume the user will only enter “yes” or “no” for both questions.

Part 4 [10 marks total]

Write the code for this part in the part4.py file. Write a program that asks a user to enter three prices in CAD (Canadian dollars). Once the user has entered all three Canadian prices, the program should then print out the one CAD price that is closest to $5.00 USD (U.S. dollars). You should use a conversion rate of 1 CAD = 0.87 USD. Note that you can use the command *abs(x)* to find the absolute value of a number *x*. You can assume the user will enter numbers each time, but these numbers may contain decimal numbers.