

COMP201 — Principles of Programming

Semester I 2009–2010

Quiz #2

Student ID: _____ Name: _____ Score: _____

Part I: Multiple Choice. Select one best answer. 1 point per item

1. In computer science, a statement is:

- ☐ a translation of machine language
- ☐ a complete computer command
- ☐ a precise description of a problem
- ☐ a section of an algorithm

2. What is the difference between a compiler and an interpreter?

- ☐ A compiler is a program, an interpreter is not.
- ☐ A compiler is used to translate high-level programming language into machine language, an interpreter is not.
- ☐ A compiler is no longer needed after a program has been translated, an interpreter is always needed to run a program.
- ☐ A compiler processes source code, an interpreter processes machine language.

3. Which of the following is *not* a legal identifier in Python?

- ☐ hongkong
- ☐ comp201
- ☐ person_at_work
- ☐ surface area

4. In Python, getting user input is done with a special expression called

- ☐ input
- ☐ for
- ☐ read
- ☐ in

5. If you are taking COMP 210 (we will check the class register), answer this question:
The name of your teacher in COMP 210 is:

- ☐ Maggie
- ☐ Lu
- ☐ Jane
- ☐ Yan

Otherwise, answer this question:

The name of your tutor in COMP 201 is:

- ☐ Jason
- ☐ Roy
- ☐ Edward
- ☐ Simon

Part II: Programming

IMPORTANT: This programming environment is not the same as the one that you are using in class. To save and compile your programs, follow the instructions below:

- Log onto the machine with the following information:
 - Location: ShortCourse
 - Username: **s** + *student id*. For example, if your student ID is 09123456d, log in with the user name **s09123456d**. All lowercase letters.
 - Password: comp201
- Run **nalwin32** and get to Python just like you do in class.
- JEdit 4.2 should be available directly from the **Start** menu, or on your desktop, or from **nalwin32**.
- **Save your programs onto the J: drive. Do not create any subfolders.** We will be using a program to collect your programs, and if you don't save it in the correct place, we won't be able to get it and you will get no marks.

6. (10 marks)

You are given the following function, which takes as a parameter a distance in miles, and gives you back the result in kilometers:

```
def milesToKm(miles):  
    km = miles*1.6  
    return km
```

You can use milesToKm() like this:

```
km = milesToKm(25)  
print("25 miles is equal to", km, "kilometers")
```

which would give you this output:

```
25 miles is equal to 40.0 kilometers
```

For this question, you have to write a function, `story()`, that will ask the user to type in some values. It will then make up a story using those values. A sample run of your function should look like this:

```
>>> story()  
Give me a boy's name: Jack  
Give me a girl's name: Jill  
How are they traveling? taxi  
What speed are they traveling at (miles/hr)? 50  
How many kilometers are they from home? 200  
*****  
Jack was driving Jill home in his taxi  
They were 200 miles from home when Jack felt ill  
Jill got worried and would not let Jack drive further  
She got into the driver's seat and started going at 50 miles per hour  
They got home in 2.5 hours
```

Obviously, Jack, Jill, taxi, 50 and 200 are inputs from the user. The rest of them are produced by the program.

To give you another example, here's another run of the function, with different inputs from the user:

```
>>> story()  
Give me a boy's name: Peter  
Give me a girl's name: Mary  
How are they traveling? plane  
What speed are they traveling at (miles/hr)? 1000  
How many kilometers are they from home? 80  
*****  
Peter was driving Mary home in his plane  
They were 80 miles from home when Peter felt ill  
Mary got worried and would not let Peter drive further  
She got into the driver's seat and started going at 1000 miles per hour  
They got home in 0.05 hours
```

Some specifications (rules) that your program **must** follow:

- You must save your work on the J: drive in a file called `story.py`
- Your file `story.py` must contain two functions:
 - One function, `story()`, which is called to tell the story.
 - Another function, `milesToKm()`, which we have given to you (just copy that into your program).
- Your `story()` **must** use the `milesToKm()` function

Your function should be saved in a program called `bmi.py` on your J: drive.

-End-