

## COP 2930 - Individual Programming Assignment #3

**Due date: Please consult WebCourses for your due date/time**

### Objectives

1. To learn how to design a simple if-else statement.
2. To practice incorporating old information (assignment statement, arithmetic expressions) into new constructs.

### Problem A: Sales Commission (sales.py)

You work at an electronics store. In addition to your regular salary of \$8 per hour, you get commission on each sale you make. For the first 10 sales you make during the week, you make an extra \$5 for each of them. If you make more than 10 sales, for each of the sales past the first ten, you make an extra \$15. Write a program that asks the user the number of hours they worked during the week and the number of sales they made during the week and calculates how much money she made for the week.

### Input Specification

Note: It is guaranteed that whoever uses your program will adhere to these specifications. This means that you do NOT have to check for them!

The number of hours worked will be an integer in between 1 and 40, inclusive.

The number of extra sales will be an integer in between 0 and 100, inclusive.

### Output Specification

Produce a single line of output with the following format:

```
You made D dollars this week!
```

where D is the amount of dollars the user earned for the week.

### Output Sample

Below is one sample output of running the program. **Note that this sample is NOT a comprehensive test.** You should test your program with different data than is shown here based on the specifications given above. In the sample run below, for clarity and ease of reading, the user input is given in *italics* while the program output is in **bold**. (Note: When you actually run your program no bold or italics should appear at all. These are simply used in this description for clarity's sake.)

### Sample Run #1

```
How many hours did you work this week?
```

```
20
```

```
How many sales did you make this week?
```

```
9
```

```
You made 205 dollars this week!
```

**Sample Run #2****How many hours did you work this week?***30***How many sales did you make this week?***16***You made 380 dollars this week!****Problem B: Who Am I? (who.py)**

In class, a simple version of the game 20 questions was shown, which differentiated between the four members of Arup's family using a set of yes/no questions. Design a similar program for your family or group of people you live with. If your family has fewer than 4 people, then add someone (maybe a pet, or a friends) who you are close to. If your family has more than 4 people, you may take the challenge of building a larger program, or for the purposes of the program, choose any four of those people for participation.

**Input Specification**

Note: It is guaranteed that whoever uses your program will adhere to these specifications. This means that you do NOT have to check for them!

The user will answer each question with either "yes" or "no".

**Output Specification**

Produce a single line of output with the following form:

You must be P.

where P is name of the person who is uniquely identified by the set of questions.

**Output Sample**

Below is one sample output of running the program. **Note that this sample is NOT a comprehensive test.** You should test your program with different data than is shown here based on the specifications given above. In the sample run below, for clarity and ease of reading, the user input is given in *italics* while the program output is in **bold**. (Note: When you actually run your program no bold or italics should appear at all. These are simply used in this description for clarity's sake.)

**Sample Run #1****Are you an adult?***yes***Do you like running outside?***yes***You must be Arup.**

**Problem C: Python Turtle (randturtle.py)**

Draw anything you like with the Python turtle adhering to the following restrictions:

1. You must use an if statement.
2. You must generate a random number somewhere in your program which affects what the turtle draws.

**Restrictions**

Please IDLE 3.6 (or higher) to develop your program. Write each in a separate file with the names specified previously, **sales.py**, **who.py**, and **randturtle.py**

Each of your **three** programs should include a header comment with the following information: your name, course number, assignment title, and date. Also, make sure you include comments throughout your code describing the major steps in solving the problem.

**Grading Details**

Your programs will be graded upon the following criteria:

- 1) Your correctness
- 2) Your programming style and use of white space. Even if you have a plan and your program works perfectly, if your programming style is poor or your use of white space is poor, you could get 10% or 15% deducted from your grade.
- 3) Compatibility to IDLE.