Python Programming Practical 1

Due: 28 Jan 2013

Instructions
Submit the following as a git repository cpy5python.git. Your files should be organized as follows:

```
[cpy5python]
  [practical01]
    q1_fahrenheit_to_celsius.py
    q2_calc_cylinder_volume.py
    q3_miles_to_kilometre.py
    q4_sum_digits.py
    q5_upper_to_lower.py
    q6_find_ascii_char.py
    q7_generate_payroll.py
```

Your repository should include a README with your name and a brief description eg

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1. (Converting Fahrenheit to Celsius)
Write a program `q1_fahrenheit_to_celsius.py` that reads a Fahrenheit degree in double from standard input, then converts it to Celsius and displays the result in standard output. The formula for the conversion is as follows: celsius = (5/9) * (fahrenheit - 32)

2 (Computing the volume of a cylinder)
Write a program `q2_calc_cylinder_volume.py` that reads in the radius and length of a cylinder and computes its volume using the following formulae:
area = radius * radius * pi
volume = area * length

3 (Converting miles into kilometers)
Write a program `q3_miles_to_kilometre.py` that reads a number in miles, converts it to kilometres, and displays the result. One mile is 1.60934 kilometres. Display your answer correct to 3 decimal places.

4 (Summing the digits in an integer)
Write a program `q4_sum_digits.py` that reads an integer between 0 and 1000 and adds all the digits in the integer. For example, if an integer is 932, the sum of all its digits is 14.
Hint: Use the % operator to extract digits, and use the // operator to remove the extracted digit. For instance, 932 % 10 = 2 and 932 // 10 = 93

5 (Converting an uppercase letter to lowercase)
Write a program `q5_upper_to_lower.py` that converts an uppercase letter from standard input to a lowercase letter by making use of its ASCII value..

6 (Finding the character of an ASCII code)
Write a program `q6_find_ascii_char.py` that receives an ASCII code (an integer between 0 and 127) and displays its character. For example, if the user enters 97, the program displays character a.

7 (Payroll)
Write a program `q7_generate_payroll.py` that reads the following information and prints a payroll statement. A sample input and output session is as follows:

Sample input:

```
Enter name: Lim Ah Seng
Enter number of hours worked weekly: 10
Enter hourly pay rate: 6.75
Enter CPF contribution rate(%): 20
```

Sample output:

```
Payroll statement for Lim Ah Seng
Number of hours worked in week: 10
Hourly pay rate: $6.75
Gross pay = $67.50
CPF contribution at 20% = $13.50
Net pay = $54.00
```