

**HOMEWORK 1****Using Print and Python Data Types****Due 6.00pm Aug 30<sup>th</sup> 2018**

**Please submit .PY code for all 10 problems as a single .zip file and have it uploaded to the course website.**

- 1) Write a python program to assign two integer and one float variable to 10, 15, and 12.6 respectively. The program should then print these values to the console screen.
- 2) Write a python program to prompt the user to input her/his name and age. Print the values back to the console output screen in the format as shown below.

Input:

Enter your name: Binil

Enter your age: 39

Output:

Binil, you are 39 years old

- 3) Write a python program which uses the formula  $C = (5/9)*(F-32)$  to print the Fahrenheit temperatures and their centigrade or Celsius equivalents. Ask the user to input day temperature in F and the code should output the value in Centigrade.
- 4) Write a python program to print a big 'P' in the positioning as shown below

Expected Output:

```
* * * * *
*           *
*           *
*           *
* * *
*
*
*
*
```

- 5) Write a python program that outputs the values in the format as shown below

x value		y value		expressions		results
10		5		$x=y+3$		$x=15$
20		5		$x=y-2$		$x=3$
20		10		$x=y*5$		$x=50$
20		5		$x=x/y$		$x=4$
30		5		$x=x\%y$		$x=0$

- 6) Find the weight of a car in Newton whose mass is input by the user. A solved exercise is as follows:

User inputs 1400 kg;  $W = m * g = 1400 * 9.81 = 13734\text{N}$ ;

Write a python program that asks the user for the input. Provide an output formatted as shown below:

Given Input (kg): 1400

Weight (N): 13734

- 7) Write a python program to compute the perimeter and area of a rectangle from user provided inputs. Example as follows

Input

Enter height of Rectangle in inches: 5

Enter width of Rectangle in inches: 8

Output:

The area of the rectangle is: 40 sq. in

- 8) Write a python program to accept the user full name and prints it the opposite way. (HINT: Read up on String and List Slicing in the Python Documentation)

Input: Binil Starly

Output: ylratS liniB

- 9) Write a python program to convert specified days into years, weeks and days. Assume 365 days in a year. Example

Input:

Enter number of days: 1329

Output:

Years: 3

Weeks: 33

Days: 3

- 10) Write a python program that reads an integer between 1 and 12 and prints the month of the year. Do not use condition statements.

Input:

Enter Integer: 3

Output

Month is: March

- 11) Write a script to concatenate following dictionaries to create a new dictionary.

Sample Dictionary:

```
dict_1 = {1:'Binil', 2:'Starly'}  
dict_2 = {3:'Ben', 4:'Starly'}  
dict_3 = {5:'Vineeth', 6:'Philip'}
```

Expected Result: {1: 'Binil', 2: 'Starly', 3: 'Ben', 4: 'Starly', 5: 'Vineeth', 6: 'Philip'}