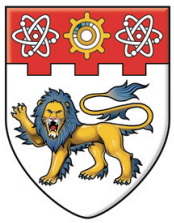

NANYANG TECHNOLOGICAL UNIVERSITY

ASSIGNMENT 2

CE1003/CZ1003:
Introduction to
Computational Thinking

Python Hangman Game

SESSION 2012/2013
SEMESTER 1

SCHOOL OF COMPUTER ENGINEERING
NANYANG TECHNOLOGICAL UNIVERSITY

Hangman

1. OBJECTIVE

The purpose of this experiment is to improve your understanding of programming with Python. You will develop a simple game of hangman which a user can play. You should consider the following when writing your code:

i) Correctness of solution
ii) Features of game
iii) Clarity of code, with comments

2. LABORATORY

Computing Lab 1 (N4-B1b-11).

3 EQUIPMENT

PCs running Windows, Linux, Mac with Python 3.0+

4. ASSESSMENT

Your assignment will be assessed by your lab supervisor. Firstly make sure you create a game that works, the python file should execute as a script. The supervisor will look at the features of your game aswell as the style of your coding. Make sure you code is succinct and **clearly** documented. Your code should be easy to understand. The assessment criteria will be:

i) Correctness of solution
ii) Features of game
iii) Clarity of code, with comments

5. PROBLEM

Your task is to write a version of the hangman game in python: http://en.wikipedia.org/wiki/Hangman_(game).

The minimum requirements for your program should be:

- Program selects a random word (you need a source – see hints)
- Show the player the word length e.g., _ _ _ _ _ _ _ => HANGMAN
- Player takes turn to guess letters
- After each guess program reports success or failure
- Game finishes when player guesses word, or after 9 failed attempts
- The player loses after 9 failed guesses are taken and wins if word is guessed before this happens

You can add as many features as you like to the game, for example: displaying graphic of hangman, showing word topic or category to aid the guessing, show list of previously guessed letters, display current correctly guessed letters, etc.
Please be as creative as you can be.

6. HINTS

Basic hints…

a. First build a list of words, you can use a dictionary object (datatype) to store by topic/category. This doesn't need to be too large, you can manually create this (for example 20 words, 4 topics with 5 words per topic is fine)
b. Randomly select a word when the game starts, show number of letters at start (see import random, random.choice(list))
c. Show a prompt asking for letter
d. Check if the letter input is contained within the word
e. Determine if the guess was right or wrong, do the appropriate action for each case. You can also display the hangman after each guess!
f. Repeat this process until the game ends. (with win or loss)

6. SUBMISSION

I. This assignment is due at **08:30am, Nov 9th**.

II. Please label your python scipt with your name and lab group, e.g., fe2_michael_lees.py

III. When submitting your code, please include also a PDF file, say fe2_michael_lees.pdf, showing one example game trace. To create this PDF file, you may use MS Word (or any other tool) and then print out the document to a PDF file by tools like cutepdf (www.cutepdf.com) (or by any other tool that you can generate a PDF file).

IV. In this assignment, you do not need to submit hardcopies but make sure both your Python program file and report PDF file are correctly named. After that, you can submit them by the "Turnitin assignments tool" in Edventure. If you program requires special libraries to run – please inform you lab supervisor. We encourage you to use exisiting libraries if you like – but please make sure your lab supervisor is happy with this and that they are able to successfully run your application.

V. Late Submission could be penalized, in the case of late submission authorized or not, please submit directly to your lab supervisor (i.e., not through edventure). The date and reason for submission will be noted and reported to the professor.

7. PLAGIARISM

Please be reminded that **PLAGIARISM** (or copying part of/complete assignment) is considered as **CHEATING**, which is strictly prohibited. We will use plagiarism checking systems to check your work. You will get zero mark on your assignment if you are found guilty of plagiarism (copy from others OR give your work to others for copy). Whether you are the person sharing your work or the person copying, you can both be punished. This could also impact your long term University career – so please do not even consider and form of copying.

8. REFERENCES

Lecture Notes
Course Text Book ('Practice of Comptuing using PYTHON')
Pyhton online reference