**4CS001 - Coding Challenge 4***Pair-Programming Project*

**Due: Tuesday 27th September 2016 at 11:59pm**   
**This assignment is worth 20% of the overall module grade**

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Introduction:

This coding challenge will assess your knowledge of Python programming and computational problem solving, as well as your ability to work well in a team environment.

The marking scheme for this task is on Canvas, make sure you check back on a regular basis as you work through the assessment. **There is NO additional challenge segment for this task.**

This task should be completed in pairs, if you have trouble finding a partner then please contact the module leader as soon as possible. In exceptional cases students may be allowed to work alone, however, this must be approved beforehand.

Task Overview:

Text adventures (or interactive fictions) are one of the oldest computer game genres, dating back to the 60's and 70's. Hardware limitations at the time made developing graphical interfaces challenging. Instead, games were controlled through textual interfaces, with input provided by the player in the form of simple words or phrases such as “North” or “Follow the Road”. These inputs are parsed and used to update the internal game state, which is then relayed to the player via textual output. This interaction forms the main gameplay loop and often involves players making their way through an in-game world of different rooms, obtaining various items, solving puzzles and much more. The possibilities are endless…

To get a better idea of what these games are all about, it’s worth checking out some popular games in the genre such as: ‘Adventure’, ‘Dreamhold’ and ‘Zork’.

**Your task is to create your own text adventure game in Python.**

Getting Started:

Start by downloading the file text\_adventure.py from Canvas. Look through the file and read the included documentation. Add your name and student number to the top of the file.

Requirements:

You will develop a program that allows users to play an interactive text adventure game against the computer. The computer should present players with a series of choices and process their inputs until the player completes the game or fails in the process.

Here is the overarching behaviour we expect:

1. Present players with the name of the game and an introduction on launch.
2. Check if the player has won or lost the game You should either:
   1. Inform the player they’ve lost and end the game.
   2. Congratulate the player and end the game.
3. Players should be presented with some narrative to progress the game.
4. Players should be given choices to pick from that allow them to interact with the world.
5. Players should pick a choice or enter a verb/command. This might allow them to move to a new location, pick up or drop an item, attack enemies etc.
6. Check if the input entered by the player is valid, if not keeping prompting the user until a valid response is received.
7. Parse the players input, update the internal game state and proceed to step 2.

Requirements (Advanced):

The above section describes the basic requirements needed to attain a passing grade. However, to achieve the maximum possible mark, you will need to add more complex systems and functionality, showcasing the knowledge and programming skills you have developed over the course of the module. Below are some possible suggestions:

* Rather than giving players fixed choices to select from. Allow them to enter more complex inputs/verbs. This should help to give the impression that more choice is available to players. For example:
  + Rather than having 3 choices
* depending upon the level of complexity desired.