Lab: Exceptions

So far we have not worried about the input the user has provided for their name. We have assumed that they have entered something. What happens if they just press return? At the moment the answer is nothing, the user just gets a blank name.

We are now going to address this by performing a check for the user input for their name. If the input is an empty string (represented by '') then we will throw an exception.

The exception will be a custom exception called NumberGuessGameException.

Modify your program such that

1. You create a new custom exception class called NumberGuessGameException which extends the Exception class. The definition for this class is given below.
2. This exception takes a string describing the problem.
3. Ensure that there is a function that asks the user for their name. If they merely press enter then raise the NumberGuessGameException, providing a suitable explanation of the problem.
4. Now add some exception handling code to your application so that it notifies the user that there was a problem and then terminates the game.

An example output generated by the program might look like:

```
Loading Player Information
Welcome to the number guess game
Do you want to see the instructions?: n
Do you want the computer to play? n
Please enter your name>:

A problem was encountered within the program
Invalid Name
Game Over
Traceback (most recent call last):
  File "/number_guess_game.py", line 100, in <module>
    play_game()
  File "/number_guess_game.py", line 45, in play_game
    player = get_player()
  File "/ number_guess_game.py", line 38, in get_player
    raise NumberGuessGameException('Invalid Name')
NumberGuessGameException: Invalid Name
```

The NumberGuessGameException can be defined as follows:

```python
class NumberGuessGameException(Exception):
    """ Class representing errors in the number guess game"""
    def __init__(self, msg):
        super().__init__(msg)
```