

Chapter 2: Iteration P2

Question Sheet 1

Instructions

You will need to use the textbooks from the shelf to complete the questions/tasks. GCSE for OCR Computer Science Student Book. You have all been given your own copy, so just type directly into this document.

Indefinite Loops

With indefinite loops we don't know how many times the code will loop around because it will quit the loop when a condition is met like a definite loop, but this time we don't know when the condition will be met.

1. Look at the pseudocode at the bottom of page 29 and continues over on page 30. What do you think the program would do. Explain below. It would make a user input a password that would then become the storedPassword that can then be used as a safe keep and will only display a message when the stored password is then repeated
2. Copy the code below into Python or Repl.it. This is an example of an indefinite loop because the number of times it can loop around can vary (is not definite) as it depends on the number of times it takes to get the password correct. Once you have the code working. Explain how the code works below using technical language. The variable password is coded to the word secret and unless the correct word of secret is used it will display "sorry the value entered is incorrect - try again" if the variable assigned name of secret is input the screen will display Thank you. You have entered the correct password

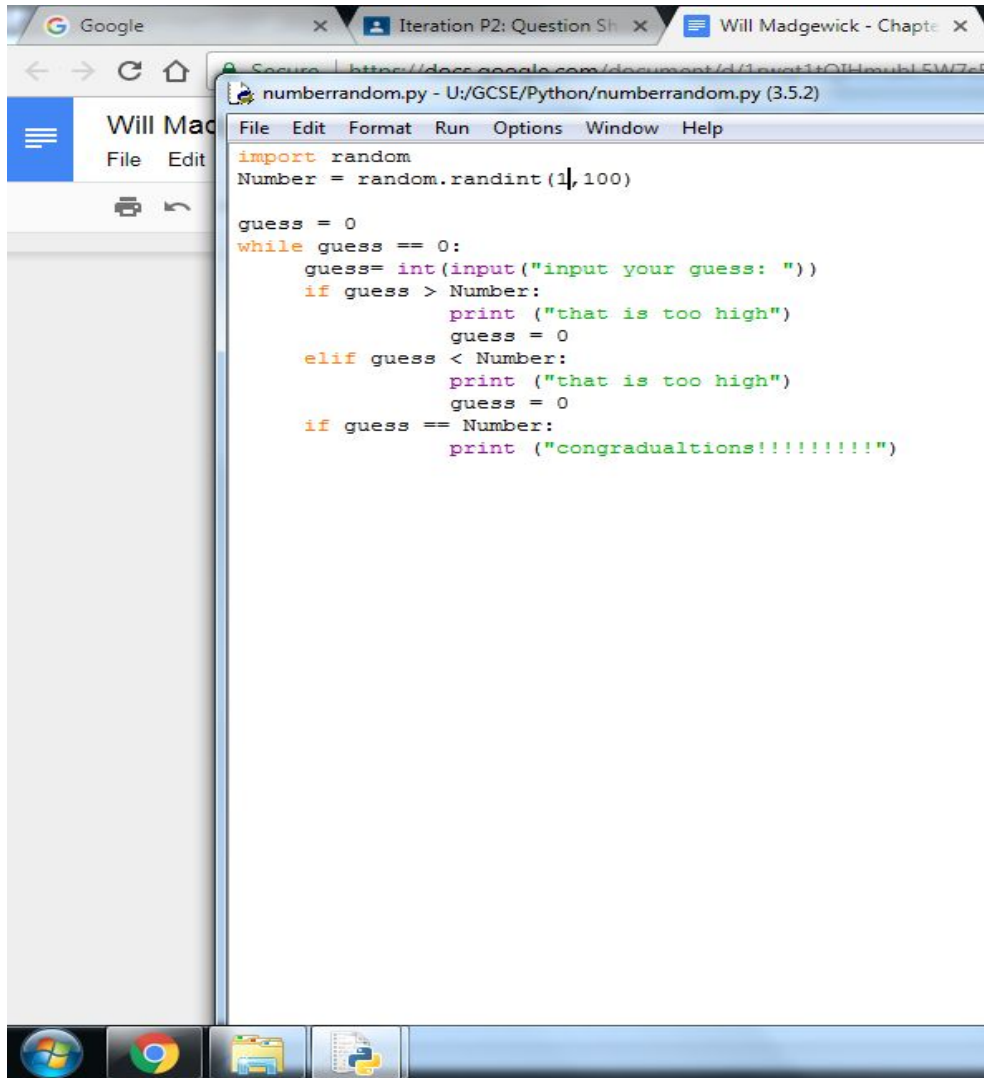
```
1 #Indefinite Iteration
2
3
4 def password():
5     password = ""
6     while password != "secret":
7         password = input("Please enter the password: ")
8
9     if password == "secret":
10        print("Thank you. You have entered the correct password")
11    else:
12        print("Sorry the value entered is incorrect - try again")
13
14 password()
15
```

3. There is one main difference between the WHILE loop and the DO UNTIL loop, what is it? A while loop keeps happening throughout the codes running span whereas the do until loop comparison is not done until the end of the code block
4. Look at the pseudocode on page 32. It is designed to create a guessing number game. Try to code this up in Python and screenshot your code below. Remember you will need to convert the input to an integer and there will be a few other differences like using : at the end of IF statements and the

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elseif are elif in Python etc.



The screenshot shows a web browser window with three tabs: 'Google', 'Iteration P2: Question Sheet 1', and 'Will Madgewick - Chapter 2'. The active tab is 'Iteration P2: Question Sheet 1', which displays a Google Docs document titled 'numberrandom.py - U:/GCSE/Python/numberrandom.py (3.5.2)'. The document contains the following Python code:

```
import random
Number = random.randint(1, 100)

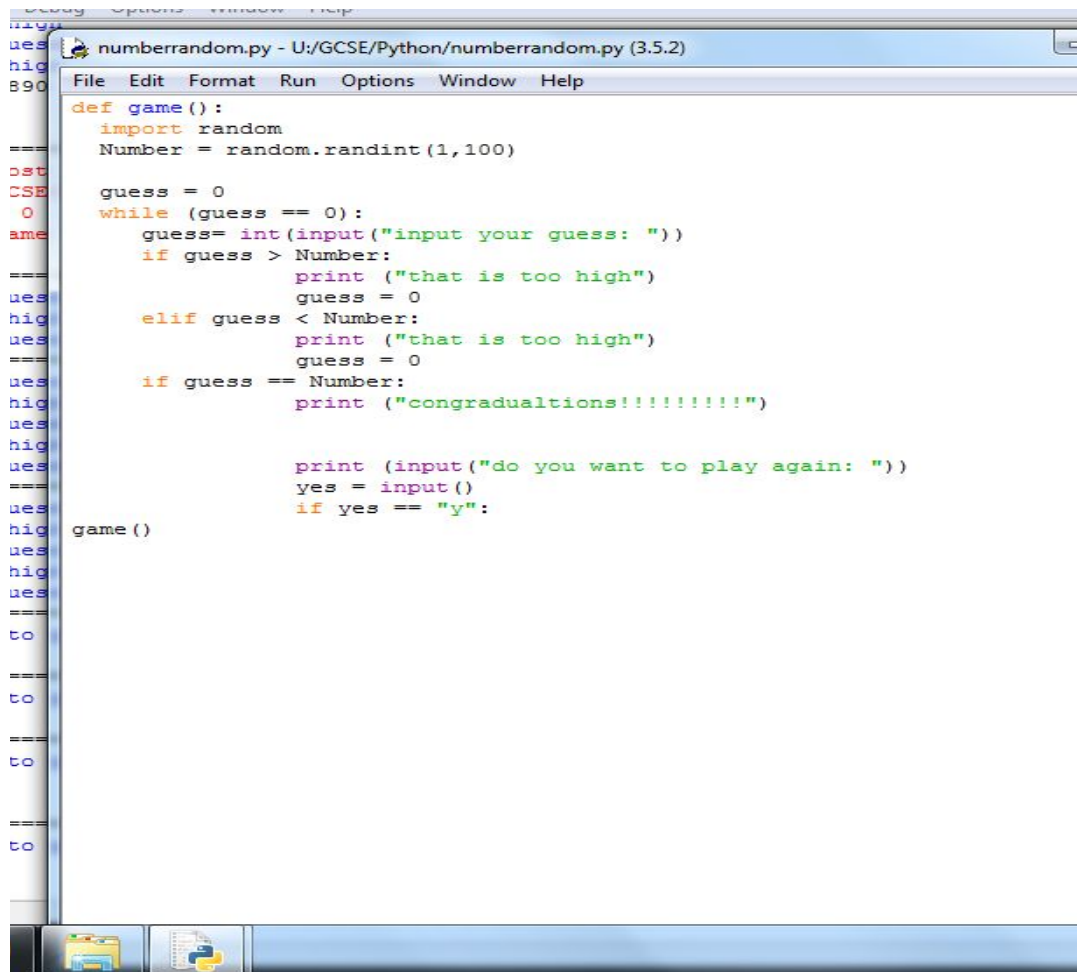
guess = 0
while guess == 0:
    guess = int(input("input your guess: "))
    if guess > Number:
        print("that is too high")
        guess = 0
    elif guess < Number:
        print("that is too high")
        guess = 0
    if guess == Number:
        print("congratulations!!!!!!!!!!")
```

The code is written in a simple text editor with a menu bar (File, Edit, Format, Run, Options, Window, Help) and a toolbar. The Windows taskbar is visible at the bottom of the screen, showing icons for the Start menu, Google Chrome, a folder, and a document.

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5. Look at activity 2.3 at the bottom of page 32. You need to improve your game so it gives the user the option to play again. Implement this in your code and screenshot your code below.



```
def game():
    import random
    Number = random.randint(1,100)

    guess = 0
    while (guess == 0):
        guess= int(input("input your guess: "))
        if guess > Number:
            print ("that is too high")
            guess = 0
        elif guess < Number:
            print ("that is too high")
            guess = 0
        if guess == Number:
            print ("congradualtions!!!!!!!!!!")

            print (input("do you want to play again: "))
            yes = input()
            if yes == "y":
                game()

game()
```

6. You have now finished all the tasks for today. If there is still time left in the lesson please continue to read Chapter 2 and Chapter 3. Do not pester your cover teacher and behave like good boys and girls :)