

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. **Indefinitely iterating until the inputted password matches the saved password.**
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. <https://repl.it/M99v/0> **Defines the function. Creates a variable called password which is assigned as an empty string. While loop until password's value becomes secret. Changing the var to the user's input. If statement to check if the input is right.**

```
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? **While loops execute till the condition becomes false, do... until loops execute until a condition becomes true.**
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 else if are elif in Python etc. <https://repl.it/M99v/1>
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. <https://repl.it/M99v/2>

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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 girl :)