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CYSE250 - 1:30
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Assignment 8: While loop in Python

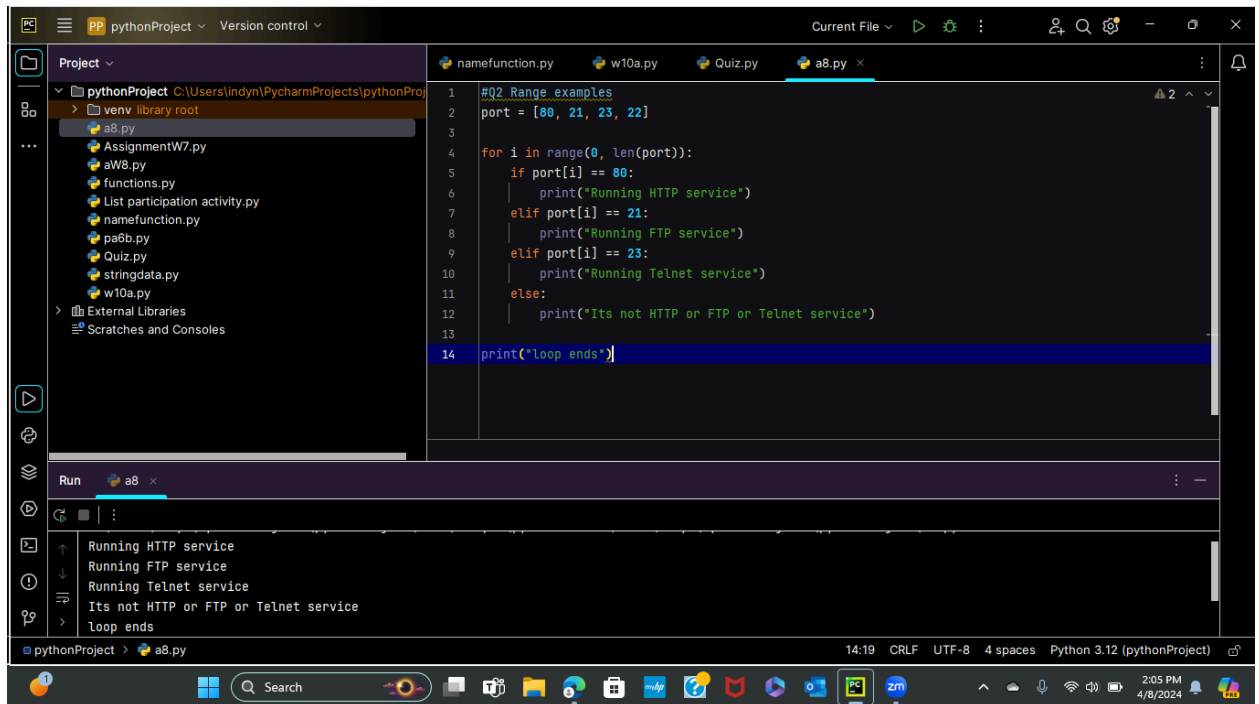
1. What does “while True” mean in python programming?

A while loop occurs until a boolean statement becomes “false”, but a while True statement would go on forever unless the loop incorporates an exit statement.

2. What is range() in python? Explain with examples.

The range function is used to generate a sequence of numbers, generally used in for loops to iterate through a sequence a fixed number of times.

For example:



The screenshot shows the PyCharm IDE interface. The left sidebar displays the project structure for 'pythonProject', including files like 'a8.py', 'AssignmentW7.py', 'aW8.py', 'functions.py', 'List participation activity.py', 'namefunction.py', 'pa6b.py', 'Quiz.py', 'stringdata.py', and 'w10a.py'. The main editor window shows the code in 'a8.py':

```
1 #Q2 Range examples
2 port = [80, 21, 23, 22]
3
4 for i in range(0, len(port)):
5     if port[i] == 80:
6         print("Running HTTP service")
7     elif port[i] == 21:
8         print("Running FTP service")
9     elif port[i] == 23:
10        print("Running Telnet service")
11    else:
12        print("Its not HTTP or FTP or Telnet service")
13
14 print("loop ends")
```

The bottom panel shows the 'Run' output for 'a8.py':

```
Running HTTP service
Running FTP service
Running Telnet service
Its not HTTP or FTP or Telnet service
Loop ends
```

The status bar at the bottom indicates the file encoding is UTF-8, 4 spaces, and the Python version is 3.12 (pythonProject).

The screenshot shows the PyCharm IDE with a project named 'pythonProject'. The file explorer on the left shows a directory structure with files like 'a8.py', 'AssignmentW7.py', 'aW8.py', 'functions.py', 'List participation activity.py', 'namefunction.py', 'pa6b.py', 'Quiz.py', 'stringdata.py', and 'w10a.py'. The main editor window displays the code in 'a8.py':

```
1 #Q2 Range examples
2 total = 0
3 list1 = [25, 35, 50, 45, 45]
4
5 for i in range(0, len(list1)):
6     total = total + list1[i]
7 print(total)
```

The Run console at the bottom shows the output of the program:

```
25
60
110
155
200
```

The status bar at the bottom indicates the file encoding is UTF-8, the line ending is CRLF, and the Python version is 3.12.

3. What is Pyfiglet modules in python?

Pyfiglet is a module that, once imported into the python editor, can change the font of a given text.

4. Write a python program to take any text or string input value (using input()) for a variable.

The screenshot shows the PyCharm IDE with the same project. The main editor window displays the code in 'a8.py':

```
5 while student in students:
6     if student == "Rhyann":
7         grade = 90
8         print("Your grade is %", grade)
9         break
10    elif student == "Sydni":
11        grade = 85
12        print("Your grade is %", grade)
13        break
14    elif student == "Terry":
15        grade = 95
16        print("Your grade is %", grade)
17        break
18    elif student == "Lori":
19        grade = 85
20        print("Your grade is %", grade)
21        break
22    elif student == "India":
23        grade = 100
24        print("Your grade is %", grade)
25        break
26    else:
27        print("You are not in this class")
28    break
29 while student in students: else
```

The Run console at the bottom shows the output of the program:

```
28:14 CRLF UTF-8 4 spaces Python 3.12 (pythonProject)
```

The status bar at the bottom indicates the file encoding is UTF-8, the line ending is CRLF, and the Python version is 3.12.

