**DAILY ASSESSMENT FORMAT**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date:** | **19 May 2020** | **Name:** | **GAURAV N R** |
| **Course:** | **Python** | **USN:** | **4AL15EC025** |
| **Topic:** | **List comprehensions,functions, file processing, imported modules** | **Semester & Section:** | **8th Sem, A Sec** |
| **Github Repository:** | **gaurav** |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **FORENOON SESSION DETAILS** | | | |
| **Image of session** | | | |
| Report –  List Comprehension:   * A list comprehension is an expression that creates a list by iterating over another container. * A basiclist comprehension:   1. [i\*2 for i in [1, 5, 10]]   Output: [2, 10,20]   * List comprehension with if condition:   1. [i\*2 for i in [1, -2, 10] if i>0]   Output: [2, 20]   * List comprehension with an if and else condition:   1. [i\*2 if i>0 else 0 for i in [1, -2, 10]]   Output: [2, 0, 20]  Functions:   * Functions can have more than one parameter:  1. def volume(a, b, c): 2. return a \* b \* c  * Functions can have default parameters (e.g. coefficient):  1. def converter(feet, coefficient = 3.2808): 2. meters = feet / coefficient 3. return meters 5. print(converter(10))   Output: 3.0480370641306997  Arguments can be passed as non-keyword (positional) arguments (e.g. a) or keyword arguments (e.g. b=2 and c=10):   1. def volume(a, b, c): 2. return a \* b \* c 4. print(volume(1, b=2, c=10))  * An \*args parameter allows the  function to be called with an arbitrary number of non-keyword arguments:  1. def find\_max(\*args): 2. return max(args) 3. print(find\_max(3, 99, 1001, 2, 8))   Output: 1001   * An \*\*kwargs parameter allows the function to be called with an arbitrary number of keyword arguments:  1. def find\_winner(\*\*kwargs): 2. return max(kwargs, key = kwargs.get) 4. print(find\_winner(Andy = 17, Marry = 19, Sim = 45, Kae = 34))   Output: Sim  File Processing:   * read an existing file with Python:  1. with open("file.txt") as file: 2. content = file.read()  * You can create a new file with Python and write some text on it:  1. with open("file.txt", "w") as file: 2. content = file.write("Sample text")  * You can append text to an existing file without overwriting it:  1. with open("file.txt", "a") as file: 2. content = file.write("More sample text")  * You can both append and read a file with:  1. with open("file.txt", "a+") as file: 2. content = file.write("Even more sample text") 3. file.seek(0) 4. content = file.read()   **Imported Modules**   * Builtin objects are all objects that are written inside the Python interpreter in C language. * Builtin modules contain builtins objects. * Some builtin objects are not immediately available in the global namespace. They are parts of a builtin module. To use those objects the module needs to be imported first. E.g.: import time   1. time.sleep(5) * A list of all builtin modules can be printed out with: * import sys   1. sys.builtin\_module\_names * Standard libraries is a jargon that includes both builtin modules written in C and also modules written in Python. * Standard libraries written in Python reside in the Python installation directory as *.py* files. You can find their directory path with sys.prefix. * Packages are a collection of *.py* modules. * Third-party libraries are packages or modules written by third-party persons (not the Python core development team). * Third-party libraries can be installed from the terminal/command line:   Windows:  pip install pandas or use python -m pip install pandas if that doesn't work.   * Mac and Linux:   pip3 install pandas or use python3 -m pip install pandas if that doesn't work. | | | |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |