

Module Detail		Trainee's Detail	
SECTOR:	ICT	Reg No:	
SUB-SECTOR:	Information Technology	Class:	Level 8 Information Technology
		Trainer's Detail	
CERTIFICATE:	Bachelor's of Technology	Name:	Eng.Leopord UWAMAHORO
MODULE (Code &Title):	TLML801 - MACHINE LEARNING	Additional info	
Competence:	Apply machine learning	Duration:	-----
		Due date:	06 th Dec, 2024
Training Centre:	IPRC Ngoma	Signature:	
Scored marks:	10	Decision:	Competent
			Not Yet Competent

Assignment 1(Preamble)

Answer and discuss the following questions:

Python recap/Practices

1. Create an integer, float, and string variable.
2. Print these to the screen.
3. Play around using different variable names,
4. Check the type of one of your variables
5. Write a couple of operations using the arithmetic operators and print the results to the screen.
6. Write a couple of operations using comparison operators
7. Create a string variable.
8. Print out the length of the string.
9. Create a string that is 10 characters in length.
 - Print the second character to the screen.
 - Print the third to last character to the screen.
 - Print all characters after the fourth character.
 - Print characters 2-8.
10. With an example created and displayed in python explain:Tuples,Liste,Dictionary,set
11. Create a list and populate it with some elements.
 - Replace the second element in your list with the integer 2
 - Use insert() to put the integer 3 after the 2 that you just added to your string.
 - Use append() to add 4 “end” as the last element in your list.
 - Use del to remove the 3 that you added to the list earlier.

12. We have a list of species:

```
species = ['dog', 'cat', 'shark', 'falcon', 'deer', 'tyrannosaurus rex']  
for i in species:  
    print(i)
```

use a for loop to print each element of the list to the screen .

13. Create an empty list

```
new_list = []
```

- Use the range() and append() functions to add the integers 1-20 to the empty list.
- Print the list to the screen, what do you have

14. Create a function that takes two inputs, multiplies them, and then returns the result

15. On python environment

Import the following libraries and gives them alias names:

```
import pandas as pd #Data manipulation  
import numpy as np #Data manipulation  
import matplotlib.pyplot as plt # Visualization  
import seaborn as sns #Visualization
```

16. Read the insurance data set

17. Print few rows and columns in the dataset to the screen

18. For visualization purpose Plot the data set (scatter plot

19. Display statistics of the dataset

20. Check for missing value

21. Plot correlation matrix of the dataset

22. Check the duplicates