**Study Sheet 1|** Lower Secondary

Stage (6-8)

1st Semester | 2023-2024

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| **Subject:** ICT | **Chapter:** 3 |
| **Objectives:**   * Introduction to Python, including the terms Program, variable and data types. | |

**Program**

Program is a set of stored instructions. When the computer reads the instructions it carries out the actions.

**Python is a programming Language**

Python is a text-based programming Language, the commands in Python are text.

**The Python Shell**

When you start Python, a window opens. This is called the Python Shell. You can enter Python commands one at a time into the Python Shell.

When you have typed a command, press the “Enter” key. Python will carry out the command.

**What is a variable?**

* ****A variable is a location in memory in which you can temporarily store a value (text or numbers).

Variable = value

**Examples**

Number1 = 5 (Numeric variable)

St\_name= ”Farah” (String(text) variable)

**Data Types**

The computer can save different types of data:

* **String data**

String data can include any keyboard characters.

Some strings are made of digits. They look like numbers, but they are not number values.

String data cannot be used in calculations.

Name = “Dana”

National\_num = “0125866458”

* **Numeric data**

Includes numeric data ex- integer data

You can convert any variable to integer using the int – function.

Examples:

A=25

A= int(A)

**Rules of naming variables in Python**

A variable name must:

* be one word only – no spaces
* use only letters, numbers and the underscore character
* Start with a letter.

Example

|  |  |  |
| --- | --- | --- |
| **Common Mistakes** | | **Correct ones** |
| Number 1 = 6 | Space is not allowed | Number1 = 6 |
| 1Num = 8 | Should Start with a letter – not a number | Num\_1 = 8 |
| Emp name = Lana | Space is not allowed  And  **“ “** must be used for **text** | Emp\_Name = **“**Lana**”** |