Python was invented by Guido Von Rossum in the year 1991.

Create a new repository on the command line

echo "# Python-Projects" >> README.md

git init

git add README.md

git commit -m "first commit"

git branch -M main

git remote add origin https://github.com/AnubhavBhatnagar27/Python-Projects.git

git push -u origin main

Push an existing repository from the command line

git remote add origin https://github.com/AnubhavBhatnagar27/Python-Projects.git

git branch -M main

git push -u origin main

Modules and Pip in python

Module is like a code library which can be used to borrow code written by somebody else in our python program. There are two types of modules in python:

1. Built in Modules - These modules are ready to import and use and ships with the python interpreter. there is no need to install such modules explicitly.
2. External Modules - These modules are imported from a third party file or can be installed using a package manager like pip or conda. Since this code is written by someone else, we can install different versions of a same module with time.

The Pip Command: It can be used as a package manager [pip](https://pip.pypa.io/en/stable/) to install a python module. Lets install a module called pandas using the following command

Pip install pandas

Using a module in Python (Usage)

Import pandas

Df=pandas.read\_csv(‘words.csv’)

Print(df)

#5 - Comments,Escape sequences and print statements :

**Python Comments**

A comment is a part of the coding file that the programmer does not want to execute, rather the programmer uses it to either explain a block of code or to avoid the execution of a specific part of code while testing.

**Single-Line Comments:**

To write a comment just add a ‘#’ at the start of the line.

**Example 1**

#This is a 'Single-Line Comment'

print("This is a print statement.")

Output:

This is a print statement.

**Example 2**

print("Hello World !!!") #Printing Hello World

Output:

Hello World !!!

**Example 3:**

print("Python Program")

#print("Python Program")

**Output:**

Python Program

**Multi-Line Comments:**

To write multi-line comments you can use ‘#’ at each line or you can use the multiline string.

**Example 1:** The use of ‘#’.

#It will execute a block of code if a specified condition is true.

#If the condition is false then it will execute another block of code.

p = 7

if (p > 5):

print("p is greater than 5.")

else:

print("p is not greater than 5.")

Output:

p is greater than 5.

**Example 2:** The use of multiline string.

"""This is an if-else statement.

It will execute a block of code if a specified condition is true.

If the condition is false then it will execute another block of code."""

p = 7

if (p > 5):

print("p is greater than 5.")

else:

print("p is not greater than 5.")

**Output**

p is greater than 5.

**Escape Sequence Characters**

To insert characters that cannot be directly used in a string, we use an escape sequence character.

An escape sequence character is a backslash \ followed by the character you want to insert.

An example of a character that cannot be directly used in a string is a double quote inside a string that is surrounded by double quotes:

print("This doesnt "execute")

print("This will \" execute")

**More on Print statement**

The syntax of a print statement looks something like this:

print(object(s), sep=separator, end=end, file=file, flush=flush)

**Other Parameters of Print Statement**

1. object(s): Any object, and as many as you like. Will be converted to string before printed
2. sep='separator': Specify how to separate the objects, if there is more than one. Default is ' '
3. end='end': Specify what to print at the end. Default is '\n' (line feed)
4. file: An object with a write method. Default is sys.stdout

Parameters 2 to 4 are optional

#6 – Variables and data types in python

**What is a variable?**

Variable is like a container that holds data. Very similar to how our containers in kitchen holds sugar, salt etc Creating a variable is like creating a placeholder in memory and assigning it some value. In Python its as easy as writing:

a = 1

b = True

c = "Harry"

d = None

**What is a Data Type?**

Data type specifies the type of value a variable holds. This is required in programming to do various operations without causing an error.  
In python, we can print the type of any operator using type function:

a = 1

print(type(a))

b = "1"

print(type(b))

By default, python provides the following built-in data types:

**1. Numeric data: int, float, complex**

* int: 3, -8, 0
* float: 7.349, -9.0, 0.0000001
* complex: 6 + 2i

**2. Text data: str**

str: "Hello World!!!", "Python Programming"

**3. Boolean data:**

Boolean data consists of values True or False.

**4. Sequenced data: list, tuple**

**list:** A list is an ordered collection of data with elements separated by a comma and enclosed within square brackets. Lists are mutable and can be modified after creation.

**Example:**

list1 = [8, 2.3, [-4, 5], ["apple", "banana"]]

print(list1)

Output:

[8, 2.3, [-4, 5], ['apple', 'banana']]

**Tuple:** A tuple is an ordered collection of data with elements separated by a comma and enclosed within parentheses. Tuples are immutable and can not be modified after creation.

**Example:**

tuple1 = (("parrot", "sparrow"), ("Lion", "Tiger"))

print(tuple1)

Output:

(('parrot', 'sparrow'), ('Lion', 'Tiger'))

**5. Mapped data: dict**

**dict:** A dictionary is an unordered collection of data containing a key:value pair. The key:value pairs are enclosed within curly brackets.

**Example:**

dict1 = {"name":"Sakshi", "age":20, "canVote":True}

print(dict1)

Output:

{'name': 'Sakshi', 'age': 20, 'canVote': True}

#7 – Calculator Using Python

**Operators**

Python has different types of operators for different operations. To create a calculator we require arithmetic operators.

**Arithmetic operators**

| **Operator** | **Operator Name** | **Example** |
| --- | --- | --- |
| + | Addition | 15+7 |
| - | Subtraction | 15-7 |
| \* | Multiplication | 5\*7 |
| \*\* | Exponential | 5\*\*3 |
| / | Division | 5/3 |
| % | Modulus | 15%7 |
| // | Floor Division | 15//7 |

Calculator Using Python