



PROGRAMMING USING PYTHON

An illustration of a person with dark hair, wearing a blue shirt, sitting in a black office chair at a brown wooden desk. They are facing a computer monitor that displays a webpage with red and blue sections. A black desk lamp is positioned above the desk, casting a warm yellow glow. On the desk, next to the monitor, are a white keyboard, a pair of glasses, and a small white object.

CONTENTS

- Introduction to python
- Python IDLE usage
- Print and input
- Digital Café
- Anaconda



Introduction-Python

- High-level programming language
- Interpreted
- Interactive
- Object-Oriented Programming Language



Why Python?

- Easy to learn
- Can be used in broad range of applications
- Open source
- Procedural, Functional, Object-Oriented



Evolution of Python

- Developed by Guido Van Rossum in early 1990s
- Named after a comedy group Monty Python
- Features derived from many languages like C, C++, Java and other scripting languages
- Available under GNU General Public License (Free, Open Source)
- Python 3.10.2 - 14 Jan 2022 being the latest version



Python Features

High Level , Interpreted , Interactive and Object Oriented Programming Language

Features

Beginner Language

Interactive Mode

Extensive Standard
Libraries

Portable

Extendable

Database and GUI
Programming



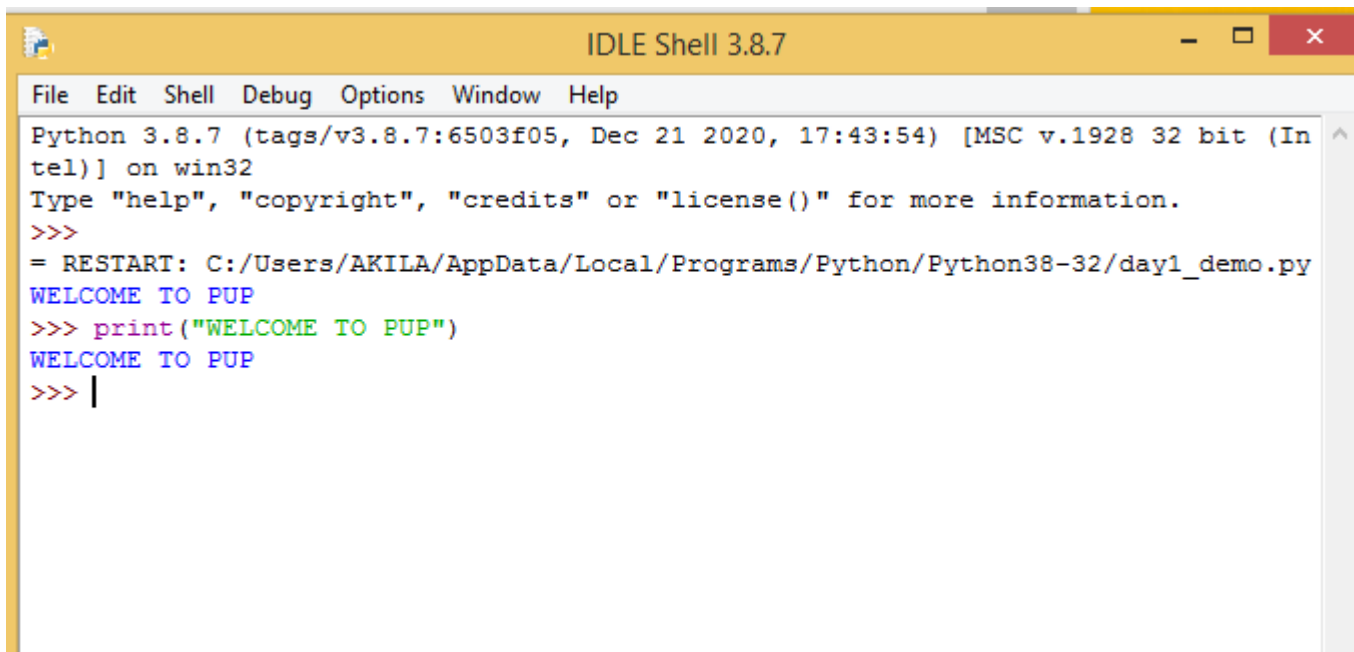
Python Installation

PYTHON DOWNLOAD: <https://www.python.org/downloads/release/python-391/>

PYTHON TUTOR: <http://www.pythontutor.com/>



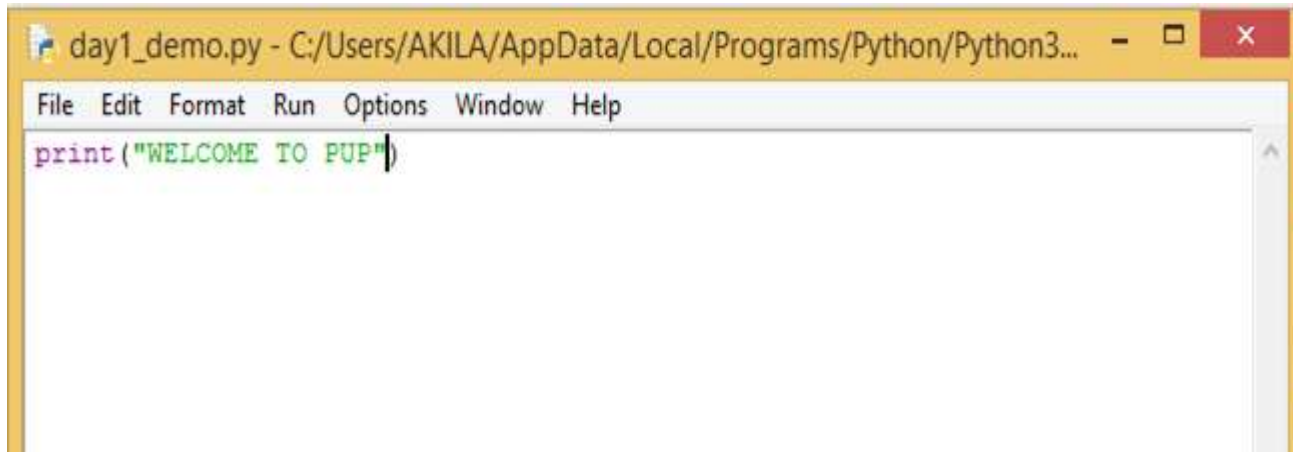
Python IDLE(Interactive interpreter)



```
Python 3.8.7 (tags/v3.8.7:6503f05, Dec 21 2020, 17:43:54) [MSC v.1928 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/AKILA/AppData/Local/Programs/Python/Python38-32/day1_demo.py
WELCOME TO PUP
>>> print("WELCOME TO PUP")
WELCOME TO PUP
>>> |
```




Python IDLE (File Editor)





Python Basics-Print statement

- To *display output* on the screen of the user - `print()`

- Syntax:

```
print([output ])
```

- Example code:

```
language="Python"  
print(language)
```

Output:
Python



Python Basics-Print statement

```
>>> print("hello")
hello
>>> print(1)
1
>>> print('a')
a
>>> print(3.24)
3.24
>>>
```

```
>>> a=10
>>> b=20
>>> print("The sum of a and b:",a+b)
The sum of a and b: 30
>>> |
```

```
>>> print(a,b)
10 20
>>> |
```



Python Basics-User Input statement

To *get user input* through keyboard – `input()`
All inputs got from the user are treated as **Strings**

Syntax:

`variablename = input([prompt])`

Ex:

`name=input("Enter your Name:")`

Enter your Name:



Python Basics-User Input statement

```
>>> b= input("Enter your age")
Enter your age32
>>> b
'32'
```

```
>>> type(b)
<class 'str'>
>>> |
```

```
>>> a=input()
3.14
>>> a
'3.14'
>>> type(a)
<class 'str'>
>>> |
```



Python Basics-User Input statement

Example code:

```
number1=input("Enter a number:")  
number2=input("Enter another number:")  
print("Result:",number1+number2)
```

Output:
Enter a number :5
Enter another number:6
Result:56

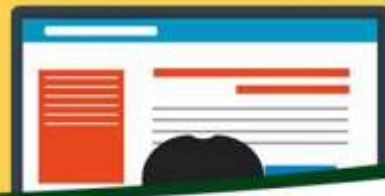


Python Basics-User Input statement

Example code:

```
number1=int(input("Enter a number:"))  
number2=int(input("Enter another number:"))  
print("Result:",number1+number2)
```

Output:
Enter a number :5
Enter another number:6
Result:11



Formatting the Output

Example code:

```
session="Session 1"
```

```
language="Python"
```

```
print(session, language)
```

Output:
Session 1 Python



Formatting the Output

Example code:

```
print('This is an {0} for formatting the  
      {1}'.format('example', 'output'))
```

Output:
This is an example for
formatting the output



Formatting the Output

Example code:

```
session="Session 1"  
language="Python"  
print('This is {0}.You are learning {1}'.format(session,  
language))
```

Output:

This is Session 1.You are learning Python



Formatting the Output - sep

- All the values are separated by blanks, which is the default behaviour.
- the default value to an arbitrary string can be changed by keyword parameter "sep" of the print function:



Formatting the Output - sep

Example 1:

q = 459

p = 0.098

```
print(q, p, p * q)
```

459 0.098 44.982

Example 2:

q = 459

p = 0.098

```
print(q, p, p * q, sep=",")
```

459,0.098,44.982



Format output-string modulo operator(%)

day1_fdemo.py - C:/Users/AKILA/AppData/Local/Programs/...

File Edit Format Run Options Window Help

```
# string modulo operator(%) to print
# print integer and float value
print("Vishesh : % 2d, Portal : % 5.2f" %(1, 05.333))
print("{0:.2f}".format(5.333))
# print integer value
print("Total students : % 3d, Boys : % 2d" %(240, 120))
# print octal value
print("% 7.3o" % (25))
# print exponential value
print("% 10.3E" % (356.08977))
```

Vishesh : 1, Portal : 5.33

5.33

Total students : 240, Boys : 120

031



Comment Line

- Comment is text in a program's code.
- Comments are used for documenting the code .
- Comment lines will not be executed by the python interpreter.
- Comments help make code easier to understand by explaining what is happening.



Comment Line

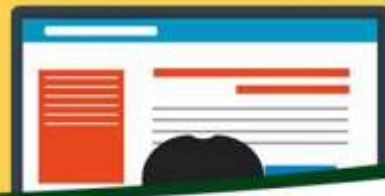
- Comment Line Representation

Single Line Comment:

#This is a single line comment

Multi-line Comment:

“””” This is multiple **””””**



Comment Line

Example code:

```
#variable declaration  
name="Ajay"  
age = 18  
"""printing the output  
using the values stored in the variables"""  
print("Name :", name)  
print("Age:", age)
```

Output:
Name: Ajay
Age: 18

Digital cafe

- URL:

<https://www.rajalakshmicolleges.net/moodle/>

- Credential

- User name- college mailid
- Password- Changeme@123



Course home page

 REC-Digital Cafe

  Akiladevi R 

 **OCS1903-PP**

 Participants

 Badges

 Competencies

 Grades

 General

 Week 1-Introduction to Python

 Week 2-Variables Datatypes and Operators

 Week 3-Algorithmic Approach: Selection control structures.

OCS1903-Programming using Python

[Dashboard](#) / [My courses](#) / [OCS1903-PP](#)

Turn editing on

Week 1-Introduction to Python

 MCQ-Introduction to Programming and Algorithms 

Week 2-Variables Datatypes and Operators

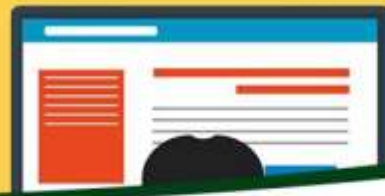
 01-Mailing Address 

 02-Hello 

 03-Area of a Room 

 04-Area of a Field 

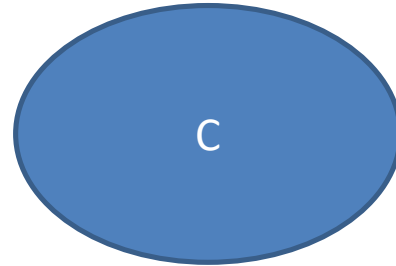
Activate Windows
Go to PC settings to activate Windows.



Quiz

What is a correct syntax to output "REC" in Python?

- A. `print "REC"`
- B. `echo "REC"`
- C. `print("REC")`
- D. `echo("REC")`

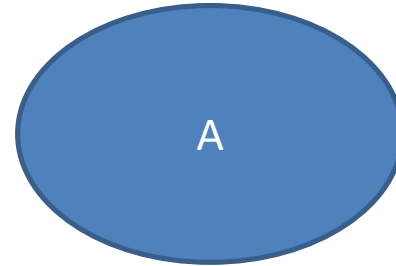




Quiz

How to insert COMMENTS in Python code?

- A. `#this is a comment`
- B. `<! this is a comment>`
- C. `"this is a comment"`





Program

Create a program that displays your name and complete mailing address. The address should be printed in the format that is normally used in the area where you live. Your program does not need to read any input from the user.

Sample Output:

V.Vignesh

Department of ECE

Rajalakshmi Engineering College

Thandalam

```
File Edit Format Run Options Window Help
print("V.Vignesh")
print("Department of ECE")
print("Rajalakshmi Engineering College")
print("Thandalam")
|
```

