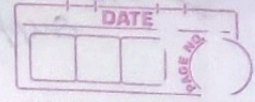


→ go to cmd then run/execute our program.

Eg:- Python prog.py.

↳ O/p will come.



ANSI

↓  
American National  
Standard Institute

② IDLE editor

i) Print("Hello world!")

ii) then save it

iii) then click on run →

→ ② Open IDLE.

③ select file → new file.

④ Type python program.

⑤ save prog. → file → save.

⑥ Run prog → Run → Run Module.

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# Programming fundamentals :-

1) Character set of python.

2) Tokens.

a. Keywords.

b. Identifiers

c. Literals.

d. Data Types

e. operators.

# Character set of python.

→ character set defines encoding and decoding standard used by python programming lang.

→ character set defines set of characters supported by python programming lang.

Alphabet to number

number to Alphabet



\* C, C++  $\rightarrow$  supports ASCII but Python supports both ASCII as well as unicode-char (which are in diff. languages.)



There are two encoding standards supports by Python lang.

- 1) ASCII  $\rightarrow$  American Standard code for information interchange.
- 2) UNICODE  $\rightarrow$  universal code.

i) ASCII :- Supports 256 characters 0-255 characters including characters in english (a-z, A-Z), digits (0-9) special characters (+, -, \*, /, % #).

ii) UNICODE Super set of ASCII, it supports character of ASCII & also having more number of characters support from other languages.

• UNICODE Supports more than 1,00,000 characters.

# Upper letter A-65  
B-66  
---  
Z-90 } In ASCII table.

# Lowercase letters a-97  
b-98  
!  
z-122 } In ASCII table



All are tokens } Eg:- (a) = (10) } in technical.  
 Identifiers      operator      literals

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# Tokens: A token is smallest individual unit with program.

→ without tokens a statement cannot be created.

- ① Keywords
- ② Identifiers.
- ③ Literals
- ④ Datatypes
- ⑤ Operators.

Eg:- To find sq<sup>root</sup> of a number for that we have to import one library.

keyword → pre-defined  
 identifier → user-defined

Eg:- `import random`  
`random (1000, 9999)`

`random = randint (1000, 9999)`  
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① Keywords:- Keywords are language related words. The meaning of keyword is reserved by Python translator.

• Each keyword is used to perform specific operation.

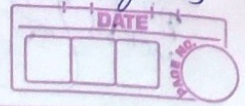
Eg:- By using libraries we can find how many keywords in Python.

`import keyword`  
`keyword.kwlist`

O/p:- False, None, True, and, assert, as, await, break, class, continue, def, del, elif, except, finally, for, from, global, if, import,



\* we can't use keywords used as a identifiers (user defined) it will give compiler errors.



In, is, lambda, nonlocal, not, or, pass, raise, return, try, while, with, yield.]

Q Finding keywords are in list:-

Soln len(keyword.kwlist)

(35) → keywords, all are in lower case except,  
[False, None, True]

↓  
all will start with upper case letter.

→ Python 3.12 version supports 35 keywords.

→ Python is case-sensitive language, it finds the difference b/w uppercase & lowercase.

# Soft keywords:-

Soft keywords can be used as user defined word or identifiers.

```
>>> keyword.softkwlist  
['_', 'case', 'match', 'type']
```

Ex a = 10

```
>>> del a
```

```
>>> del a
```

```
>>> 1
```



## # Identifiers:-

- Identifiers is programmer defined words or user defined words.
- Identifier is used to identify programming elements.

- 1) Variable names.
- 2) function names.
- 3) Data types names
- 4) program name / Module name.
- 5) package name.

# Identifiers is a single word, this word is created using alphabet (a-z, A-Z), digits (0-9) & one special character (underscore).

# Identifiers should not be keywords. & .

Eg: 1) Keywords can't be used as a identifier.  
It will give syntax error.

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Eg:- break = 1 → KW

⇒ syntax error: invalid syntax.

Eg:- Pass = 1 → KW

⇒ syntax error.

Eg:- pass = 1

= 1.

→ not error because python is case sensitive, here 'p' is small.

Eg:- A = 20