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# Python Programming

— Besant Technologies —

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# Setting Environment path

- Need to tell the command prompt where python is installed.
- Just one time task.

# Comments:

- Used to understand the code
- More readable
- More understandable
- Types:
  - Single line
  - Multi-line

# Keywords:

and	exec	not
assert	finally	or
break	for	pass
class	from	print
continue	global	raise
def	if	return
del	import	try
elif	in	while
else	is	with
except	lambda	yield

# Variables:

- Just like a container.
- Used for storing values.
- Values can be changed.
- Adv: No need to define type of variable.
- Memory efficient.
- Garbage collection.

# Operators:

- Arithmetic:  $+$ ,  $-$ ,  $*$ ,  $/$ ,  $//$ ,  $\%$ ,  $**$
- Assignment:  $=$
- Relational:  $==$ ,  $!=$ ,  $<$ ,  $>$ ,  $<=$ ,  $>=$
- Logical:  $\text{and}$ ,  $\text{or}$ ,  $\text{not}$
- Bitwise:  $\&$ ,  $|$ ,  $\wedge$ ,  $<<$ ,  $>>$ ,  $\sim$

# Numbers system conversion

- Decimal
- Binary
- Octal
- Hexadecimal

# Datatypes:

- None
- Integer
- Float
- Complex numbers
- Boolean
- Strings



# String methods:

- `upper()`
- `lower()`
- `count()`
- `find()`
- `len()`
- `replace()`
- `concat(+)`
- `format()` and fstrings

# Some more datatypes..

- Lists
- Tuples
- Set
- Dictionary

# Lists:

- Elements need not to be same datatype
- Index from '0' to len()
- Updation - adding new values, changing existing values, deleting existing values.
- Concatenation, Repetition, Iteration.
- Membership
- Indexing and Slicing

# List Function:

- `max()` & `min()`
- `len()`
- `count()`
- `list()`
- `append()` & `extend()`
- `insert()` & `index()`
- `pop()` & `remove()`
- `reverse()` & `sort()`