Untitled

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1 Question - Explain the key features of python that make it a popular choice for programming ?

```
[6]: #Answer - There are multiple features of python -:

     # EASY TO CODE - it is a high level programming language. Python is easy to␣
     ↪learn language as compared to other languages like java, c++ .
     # INTEGRATED LANGUAGE - in this interprator excute the code line by line and␣
     ↪also translate the source code to binary code .
     # OBJECT ORIENTED LANGUAGE - python supports object oriented language and␣
     ↪concepts of classes, objects, etc .
     # MULTIPLE NUMBER OF LANGUAGES - it has vast growing ecosystem of libraries .␣
     ↪There are more than 137000 libraries .
     # DYNAMIC TYPED LANGUAGE - python is dynamically typed language , because of␣
     ↪this feature we do not need to specify the tyoe of variable
```

2 Question- Describe the role of predefined keywords in python and provide example of how they are used ia aprogram ?

```
[ ]: #Answer- A keyword refers to the predefined words that python reserves for␣
     ↪working programs that have a specific meaning . We can't use
     #keywords everywhere . Python identifiers are the different values that a␣
     ↪programmers can use to define various variables, integers, functions, and␣
     ↪#classes.
```

```
[ ]: #EXAMPLES OF PREDEFINED KEYWORDS
```

```
[7]: a=10
     a
```

```
[7]: 10
```

```
[8]: type(a)
```

```
[8]: int
```

```
[9]: b= "ritika"
     b
```

```
[9]:  'ritika'
```

```
[10]:  type(b)
```

```
[10]:  str
```

```
[11]:  c=4.5
       c
```

```
[11]:  4.5
```

```
[12]:  type(c)
```

```
[12]:  float
```

```
[13]:  a=True
       type(a)
```

```
[13]:  bool
```

```
[14]:  b=False
       type(b)
```

```
[14]:  bool
```

```
[15]:  True-False
```

```
[15]:  1
```

```
[17]:  f=None
       type(f)
```

```
[17]:  NoneType
```

```
[18]:  com=5+6j
       type(com)
```

```
[18]:  complex
```

```
[19]:  com.real
```

```
[19]:  5.0
```

3 Question - Compare and contrast mutable and immutable objects in python with examples ?

```
[2]:  #Answer - Mutuable objects - which can be change after it is created
```

```
[3]: #example
     list_cont = [1, 2, 3, True, (5+6j), "ajay"]
     list_cont
```

```
[3]: [1, 2, 3, True, (5+6j), 'ajay']
```

```
[26]: b = "pwskills"
      b[0]
```

```
[26]: 'p'
```

```
[ ]: #Immutuable object - which cannit be changed even if the content is created
```

4 Question- Discuss the different types of operators in python and provide an example how they are used ?

```
[27]: #Answer - Python operators are special keywords or symbols that are used to␣
      ↪perform operation on values and variables
```

```
[28]: ##Different type of operators
      #Arthematic operators
      #logical operators
      #Bitwise operators
      #Comparison operators
      #membership operators
```

```
[29]: #1 Arthematic operators
      a=5
      b=6
      a+b
```

```
[29]: 11
```

```
[30]: a*b
```

```
[30]: 30
```

```
[31]: a**8
```

```
[31]: 390625
```

```
[32]: a/b
```

```
[32]: 0.8333333333333334
```

```
[33]: #modulus operator
      21&4
```

[33]: 4

[34]:
```
#floor operator
4//5
```

[34]: 0

[35]:
```
5==5
```

[35]: True

[36]:
```
5!=5
```

[36]: False

[37]:
```
#Logical operators
#and
#if
```

[39]:
```
True and True
```

[39]: True

[40]:
```
True and False
```

[40]: False

[41]:
```
#not operator
not True
```

[41]: False

[42]:
```
not False
```

[42]: True

[44]:
```
b=12
b=b+4
b
```

[44]: 16

[ ]: