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Question# 01

What type of errors do occur in Python, write the a program with different types of errors as well as write separate correction code?

Answer:

Types of errors occur in python:

There are three basic types of errors occur in python

1) Syntax error:

- The error in source code of a program.
- Missing small bracket at the end of following line of code
print ("Aman khan"
- It is also known as prasing error.
- When the python praser is unable to understand a line of code.

Examples:

```
In [1]: # Syntax error example here we miss parentheses.
print"(This is syntax error "
```

```
File "<ipython-input-1-00decb2cba65>", line 2
print"(This is syntax error "
```

```
^
SyntaxError: invalid syntax
```

Syntax Error Correction:

```
In [2]: #Correction of syntax error code
print("how are you")
```

```
how are you
```

2) Name Error:

When we not define a variable and we use it so this types of error is known as name error.

Example:

```
In [3]: |
String='have a great day alix '
print(string)
```

```
-----
NameError                                Traceback (most recent call last)
<ipython-input-3-cddf736c7824> in <module>
     1 #Name error variable which I declared is capitalized when I execute I have written in lower case
     2 String='have a great day alix '
----> 3 print(string)

NameError: name 'string' is not defined
```

Correction code of Name Error:

```
In [4]: # Name error correction
String='have a great day '
print(String)
```

```
have a great day
```

3) Type Error:

- It cannot convert 'int' object to 'str'.
- If you want to add or perform a function so you can do it integer with integer/string with string.
- It is not possible to add string with integer.
- Type error is actually data type error.

Example:

```
In [1]: print("this is my salary "+ 50000)
```

```
-----
TypeError                                 Traceback (most recent call last)
<ipython-input-1-a348f2030d14> in <module>
----> 1 print("this is my salary "+ 50000)

TypeError: can only concatenate str (not "int") to str
```

Type Error Correction:

```
In [5]: print("this is my house number " , 63)

this is my house number 63
```

Question# 02

What are Boolean String test, write the code for each Boolean string test code?

Answer:

Boolean String test:

- Boolean string test return boolean true or false.
- We test Boolean for checking string which answer us in true or false options.

In [8]:

```
#Boolean is used to print true or false value  
string="I love programing ";  
print(string.istitle())  
print(string.isalnum())  
print(string.startswith("I"))
```

```
False  
False  
True
```

Boolean string test code:

➤ .isalpha:

This check that word consist only on alphabets.

For example:

```
"Ahmad".isalpha()
```

So the Boolean value will be "True" because word consist of only on alphabets.

➤ .alnum():

It check that a word consist on alphabets as well as on number.
For both its value will "True".

For example:

```
"Aman678".isalnum()
```

```
"78Th".isalnum()
```

For all its value is "True" because it consists on alphabets as well as on number.

➤ .istitle():

This check that a group of words is title or not.
Title consists on different words and every words have first letter is capital.

Example:

```
"My Favourite Book Is Holy Quraan".istitle()
```

The Boolean value for this is "true" because first alphabet of every word is capital.

➤ .isdigit():

It checks that string is digit only or not.

Example:

```
"1224".isdigit()
```

For this string Boolean value is True. Because it consists on number only.

➤ .islower():

It is checking that every letter in string is in lower case or not.

Example:

```
"java".islower()
```

Its Boolean value is true because every letter is in lower case.

➤ .isupper():

It check that every letter in string is in upper case or not.

Example:

```
"AMAN".isupper()
```

Its Boolean value is true.

➤ .startswith():

It check the starting letter of string in option of true or false.

Example:

```
"laptop".startswith("l")
```

Its value is true because it start from l.

Question#03

What is formatting string input mean in Python, write a program in which formatting string input is used?

Answer:

Formatting string Input:

Formatting string are used to format the inputs.

The following are formatting string;

1. Capitalize()
2. Upper()
3. Lower()

Example:

Formatting string inputs:

In [9]:

```
user_name=input(" what is your country name : ").upper()
print(user_name)
fruit_name=input(" how long have you been there: ").capitalize()
print(fruit_name)
user_friend=input("what is your favorite game : ").lower()
print(user_friend)
```

```
what is your country name : pakistan
PAKISTAN
how long have you been there: 64
64
what is your favorite game : snooker
snooker
```
