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Subject data science

Semester 5th

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Q no 2: what are boolean string test , write the code for each boolean string test code ?

Ans:

Booolean string test return boolean True or False which are below

.isalpha()

.isalnum()

.isatitle()

.isdigit()

.islower()

.isupper()

.startswith

All the above boolean string test we used because which we write in string must single quotation (' ') or double quotation (" ")

Because sometimes the string well not right format. Which we want it or needed it.so this way we use boolean tests to check the string which the answer give it True or False .

The code for each boolean string test code which are the fellowing are:

For example .isalpha()

In []: "Hello".isalpha()

Out[]: True

In []: "Hello1 ".isalpha()

Out[]: False

Example of .isalnum()

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Example of .isalnum()

In []: " 5th ".isalnum()

Out[]: True

In []: " Ali ". isalnum()

Out[]: True

Example of .istitle()

In []: " Seven Good Habbits ".istitle()

Out[]: True

In []: " Seven Good habbits ".istitle()

Out[]: False

Example of .isdigit()

In []: " 7865 ".isdigit()

Out[]: True

In []: cm_ht =" 654 "

Print ("cm height:",cm_ht,"is all digits =",cm_ht.isdigit())

Cm height: 654 is all digits = Tru

.Example of .islower()

```
In [ ]: print (" Python ").islower()
```

False

```
In [ ]: print (" python ").islower()
```

True

For example of .isupper

```
In [ ]: print (" python ").isupper()
```

False

```
In [ ]: print (" PYTHON ").isupper()
```

True

For example of .startswith

```
In [ ]: "string".startswith("T")
```

Out []: False

```
In [ ]: "string".startswith("S")
```

Out []: True

Q no 2: what type error occurs in python, write the program with different types of errors as well as write separate correction code?

Ans:

There are three type error occur in python which are below :

- Synthax error
- Runtime error
- Logical error

Syntax error :

Syntax errors are occurs in python errors in your code that the computer cannot interpret.in python these errors are often

- Spelling errors
- The omission of important characters (such is a missing colon)
- Inconsistent use of /wrong indentation

The example of syntax errors which is

```
Name =input("what's your name ?")
```

```
If name == "bob"
```

```
Print("nice to meet you both !")
```

Run the program

Traceback (most recent call last):

File "python",line 3

```
If name == "bob"
```

Syntax error: invalid system

- The correction of the code:

```
Name =input("what's your name ?")
```

```
If name == "bob":
```

```
    Print("nice to meet you both !")
```

➤ Run the program

What is your name ? bob

Nice to meet you bob!

➤ Runtime errors:

There are errors that occur that are not detected until runtime.

These are caused by:

- It can't find some data because it does not exist .
- It can't perform an action on the data it has been given because it is an invalid type of data.

These types of errors are only found at runtime and often through lots of testing.

The program of runtime errors example:

```
Age = input ("how old are you ?")
```

```
If age > 50:
```

```
Print("wow , you're old !")
```

➤ Run the program

how old are you ? 30

Error:

File " python ",line 4,in <module>

Type error : ' >'not supported b/w instances of 'str ' and 'int '

➤ Correction of the program

```
Age = input ("how old are you ?")
```

```
Age = int (age)
```

```
If age > 50:
```

```
Print("wow , you're old !")
```

➤ Run the program

how old are you ? 50

wow, you're old!

3 > logical errors :

These are errors in the code that do not throw an error at all but simply do what you intended the code to do.

These are the most difficult to spot , b/c they can only be found through full and extensive testing.

Logical error program

```
Temp=int(input("how warm is it today ?"))
```

```
If temp<30:
```

```
Print("wow its's hot !")
```

```
Else:
```

```
Print("brrr it's cold")
```

➤ Run the program

How warm is it today?40

Brrr its cold

➤ Correction of program

```
Temp=int(input("how warm is it today ?"))
```

➤ If temp > 30:

```
Print("wow its's hot !")
```

Else:

```
Print("brrr it's cold")
```

➤ Run the program

How warm is it today?40

Wow it's hot!

Q no 3:

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

Ans:

string **formatting** to create new, **formatted** together with a **format string**, which contains normal text together with **python** interpreter about what format text it will be printing, on the console. String **is the** format in this case.

The program which is used the formatting string input which are below

For example :

Formatting string input()


```
In [ ]: fav_food = input ("what is your favorite food ?  
:").lower()
```

```
Print(fav_food )
```

What is your favorite food?: BIRYANI

Formatting string input()

Biryani

```
In [ ]: fav_food = input ("what is your favorite food  
? :").upper ()
```

```
Print(fav_food )
```

What is your favorite food?: biryani

BIRYANI

Formatting string input()

```
In [ ]: fav_food = input ("what is your favorite food ?  
:").capitalize ()
```

```
Print(fav_food )
```

What is your favorite food?: biryani

Biryani