14th April 21

Previous Day

Print

Python Basic Programs

Lecture Flow

- how to print the type of the variable
- how to do operations
- MCQs

Topics and Explanation

1. How to print the type of the variable?

   Problem

```
3   x = 5
4   print("Value of x is: ", x)
5   print("Type os value in x is: ", type(x))
6   x = True
7   print("Value of x is: ", x)
8   print("Type os value in x is: ", type(x))
9   x = False
10  print("Value of x is: ", x)
11  print("Type os value in x is: ", type(x))
12  x = 7.8324823
13  print("Value of x is: ", x)
14  print("Type os value in x is: ", type(x))
15  x = "My Name is Priyesh"
16  print("Value of x is: ", x)
17  print("Type os value in x is: ", type(x))
```

- line5, line8, line11, line14, line17, we are taking the type of x and printing it.

Output

```
~/RichBiodegradableLicenses$ python3 lecture08_notes.py
Value of x is:  5
Type os value in x is:  <class 'int'>
Value of x is:  True
Type os value in x is:  <class 'bool'>
Value of x is:  False
Type os value in x is:  <class 'bool'>
Value of x is:  7.8324823
Type os value in x is:  <class 'float'>
Value of x is:  My Name is Priyesh
Type os value in x is:  <class 'str'>
~/RichBiodegradableLicenses$ python3 lecture08_notes.py
```

2. How to do operations ?

Problem

```python
a = 13
b = 5
c = a+b
# 13+5 = 18
print(c)
d = a-b
# 13-5 = 8
print(d)
e = a*b
# 13*5 = 65
print(e)
f = a/b
# 13/5 = 2.6
print(f)
g = a//b #basically remove the remainder and forget
# its like only quotient or integer division
# 13//5 = 2
print(g)
h = a%b
# 13%5 = 3
print(h)
i = a**b
# ** is power which means you know a**b = a*a*a ... b times
# 2 ** 8 = 2*2*2*2... 8 times
print(i)
```

Output

```
~/RichBiodegradableLicenses$ python3 lecture08_notes.py
18
8
65
2.6
2
3
371293
```

Problem

```
57  print(5==5 and 8==8 and 9==9 and 10==11)
58
59  # and means all conditions must satisfy
60
61  print(5==5.5 or 8==8.0 or 9==10 or 11==20 or 21==30)
62
63  # or means atleast one condition must satisfy
64
65
66
67  print("Priyesh"=="priyesh")
68
69  age = 21
70
71  print(age>=18 and age<=65)
```

Output

```
False
True
False
True
```

Problem

```
78   sal = 56200.50
79   sal = int(sal)
80   print(sal)
81   sal = float(sal)
82   print(sal)
83   sal = str(sal)
84   print(sal, type(sal))
85   sal = float("56200.0")
86   print(sal, type(sal))
87   sal = int(sal)
88   print(sal, type(sal))
```

Output

```
~/RichBiodegradableLicenses$ python3 lecture08_notes.py
56200
56200.0
56200.0 <class 'str'>
56200.0 <class 'float'>
56200 <class 'int'>
```

Problem

```
97   working = 1000
98   working = bool(working)
99   print(working)
100  working = 0
101  working = bool(working)
102  print(working)
103  working = -1000
104  working = bool(working)
105  print(working)
106
107
108  """
109  when converting integer and float to boolean, right any
     number except 0 will be converted to True and 0 alone will be
     converted to false
110  """
```

```
122   the reason is that True means something is present and False
      means nothing is present. and the only way to show nothing is
      present is by 0. so 0 is false. else it is true.
```

Output

```
~/RichBiodegradableLicenses$ python3 lecture08_notes.py
True
False
True
~/RichBiodegradableLicenses$
```

Problem

```
125  b = input("Enter the first number: ")
126  a = int(b)
127  # print("Value of a is: ", a, ". Type of a is: ", type(a))
128  c = input("Enter the second number: ")
129  d = int(c)
130
131  e = a%d
132  # e = 13 % 2 = 1
133  f = a//d
134  # f = 13//2 = 6
135  g = a**d
136  # g = 13**2 = 169
137  print(e)
138  print(f)
139  print(g)
140
141
142  # a = 13
143  # d = 2
144  h = (a!=d) and (a < 20) and (d >= 2)
145  print(h)
146
147  i = bool(a/d - a//d)
148  # 13/2 = 6.5, 13//2 = 6 => 0.5
149  print(i)
150
151  # BODMAS Rule: Bracket, of, division, multi, add, sub
```

Output

```
~/RichBiodegradableLicenses$ python3 lecture08_notes.py
Enter the first number: 13
Enter the second number: 2
1
6
169
True
True
~/RichBiodegradableLicenses$
```

MCQs

What is the output?

```
sal = 56200.50

sal = int(sal)

sal = float(sal)

print(sal)
```

Attempted - 38 (66.67%) EASY

☑ 56200.0	76.32%
☐ 56200	2.63%
☐ 56200.50	15.79%
☐ True	10.53%

Find the output of :

```
a = 13
b = 5
d = a /b
c = a//b
print(bool(d-c))
```

Attempted - 37 (64.91%) EASY

- [ ] 0.6 — 10.81%
- [ ] 2.6 — 2.7%
- [x] True — 78.38%
- [ ] False — 8.11%

What is the output of the print command?

```
a = input("Enter the first number: ")
b = int(a)
c = input("Enter the second number: ")
d = int(c)

print((a==d) and (a!=d))
```

Attempted - 39 (68.42%) EASY

- [ ] 10
- [ ] 12
- [ ] True — 15.38%
- [x] False — 84.62%

What is the output of the following code:

```
working = 1000.45

working = bool(working)

print(working)
```

Attempted - 39 (68.42%) | EASY

1000.45	5.13%
"1000.45"	5.13%
True	84.62%
False	5.13%