Assignment - Python [Major] by Deepak

Q1. Find the datatype of these two declaration :
    x = 5
    y = "John"

Ans :-

```
In [1]: #Find the datatype of these two declaration :
        x = 5
        y = "John"

In [14]: type(x)

Out[14]: int

In [15]: type(y)

Out[15]: str
```

Q2. Check whether the following syntax is valid or invalid for naming
    a variable. :
    Example: abc=100 #valid syntax
    i. 3a=10
    ii. @abc=10
    iii. a100=100
    iv. _a984_=100
    v. a9967$=100
    vi. xyz-2=100

Ans:- Variable names in Python cannot begin with a number.

(i)   Invalid
        Variable names in Python cannot begin with a number.

```
In [16]: 3a=10
          Cell In[16], line 1
            3a=10
              ^
          SyntaxError: invalid decimal literal
```

(ii) Invalid

Variable names in Python cannot begin with a Symbol.

```
In [17]: @abc=10
           Cell In[17], line 1
             @abc=10
             ^
         SyntaxError: invalid syntax. Maybe you meant '==' or ':=' instead of '='?
```

(iii) Valid

```
In [18]: a100=100

In [19]: print(a100)
         100
```

(iv) Valid

```
In [20]:    _a984_=100

In [22]: print(_a984_)
         100
```

(v) Invalid

Variable names in Python cannot contain symbol

```
In [23]:  a9967$=100
```

```
  Cell In[23], line 1
    a9967$=100
         ^
SyntaxError: invalid syntax
```

(Vi)   Invalid

Variable names in Python cannot cantain symbol

```
In [24]:  xyz-2=100
```

```
  Cell In[24], line 1
    xyz-2=100
    ^
SyntaxError: cannot assign to expression here. Maybe you meant '==' instead of '='?
```

Q3. Check if element exists in list in Python :
list = test_list = [1, 6, 3, 5, 3, 4]
1. Check if 3 exist or not.

```
In [30]: test_list = [1, 6, 3, 5, 3, 4]
```

```
In [31]: if 3 in test_list:
             print("3 is exist")
         else:
             print("3 is not exist")

         3 is exist
```

Q3(2)   Check if 9 exists or not.

Ans:-

```
In [30]: test_list = [1, 6, 3, 5, 3, 4]
```

```
In [32]: if 9 in test_list:
             print("9 is exist")
         else:
             print("9 is not exist")

         9 is not exist
```

Q4   Take the user input to print the current date.

Ans :-

```
In [4]: import datetime
        a = input("Enter the current date in = ")
        now = datetime.datetime.now()
        Date = now.date()

        print("user input", a)
        print(Date)


        Enter the current date in = 27/07/2010
        user input 27/07/2010
        2023-07-17
```

Q5   what is the output of the following code :

   (a.)   print 9//2

Ans :-

   Floor Division divides two numbers and rounds the result down to the
   nearest integer

   In [3]: print (9//2)

           4

   (b.)   print 9%2

Ans:-

% This sign is show as Remainder it means 9 divided 2

Then how many numbers is remain.

   In [5]: print (9%2)

           1

Q6.   Print First 10 natural numbers using a while loop.

Ans:-

```
a = 1
while a <= 10:
    print(a)
    a +=1
```

```
1
2
3
4
5
6
7
8
9
10
```

Q 7.   Write a program to accept a number from a user and calculate
       the sum of all numbers from 1 to a given number.
       For example, if the user entered 10 the output should be 55
        (1+2+3+4+5+6+7+8+9+10)

```
num = int(input("Enter a number: "))
sum = 0

for i in range(1, num + 1):
    sum += i

print("The sum of numbers from 1 to", num, "is:", sum)
```

```
Enter a number: 10
The sum of numbers from 1 to 10 is: 55
```

Q8.   Write a Python program which iterates the integers from 1 to 50.
      For multiples of three print "Fizz" instead of the number and for
      the multiples of five print "Buzz". For numbers which are
      multiples of both three and five print "FizzBuzz".
      Example :
      Fizzbuzz
      1
      2
      fizz

4
Buzz

Ans:-

```python
for num in range(1, 51):
    if num % 3 == 0 and num % 5 == 0:
        print("FizzBuzz")
    elif num % 3 == 0:
        print("Fizz")
    elif num % 5 == 0:
        print("Buzz")
    else:
        print(num)
```

```python
for num in range(1, 51):
    if num % 3 == 0 and num % 5 == 0:
        print("FizzBuzz")
    elif num % 3 == 0:
        print("Fizz")
    elif num % 5 == 0:
        print("Buzz")
    else:
        print(num)
```

```
1
2
Fizz
4
Buzz
Fizz
7
8
Fizz
Buzz
11
Fizz
13
14
FizzBuzz
16
17
Fizz
19
Buzz
Fizz
22
23
Fizz
Buzz
26
Fizz
28
29
FizzBuzz
31
32
Fizz
34
Buzz
Fizz
37
38
Fizz
Buzz
41
Fizz
43
44
FizzBuzz
46
47
Fizz
49
Buzz
```