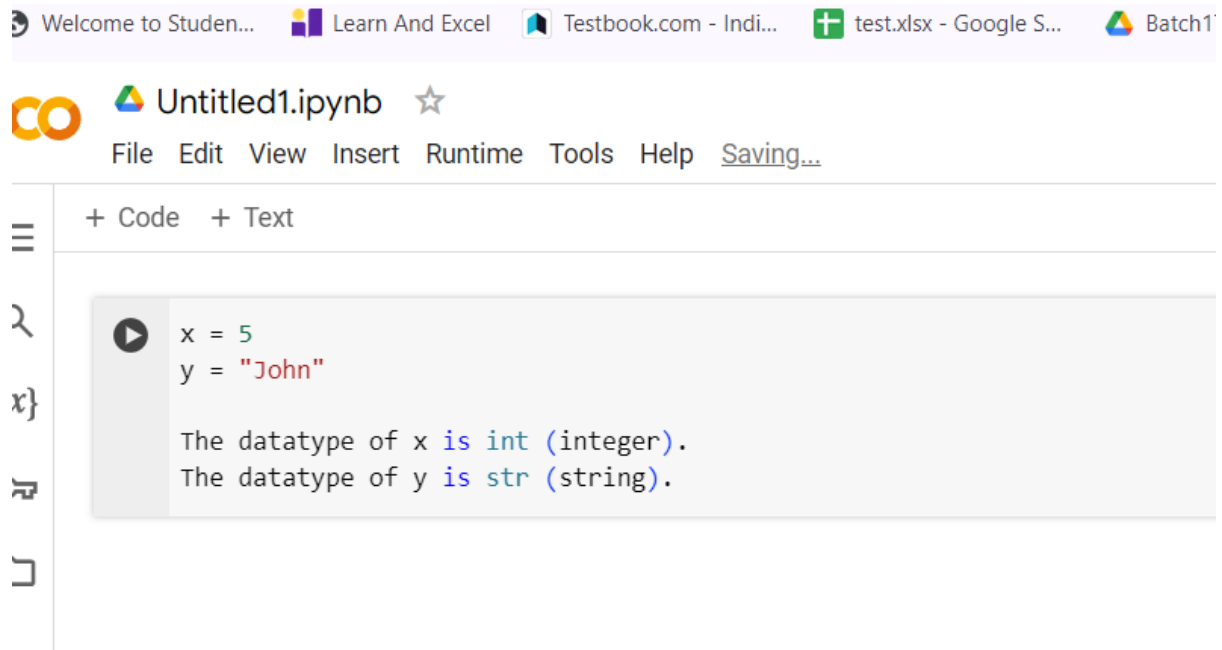


Q1) Find the datatype of these two declarations.

`x = 5`

`y = "John"`



The screenshot shows a web browser with several tabs open: 'Welcome to Studen...', 'Learn And Excel', 'Testbook.com - Indi...', 'test.xlsx - Google S...', and 'Batch1'. The active tab is a Jupyter Notebook titled 'Untitled1.ipynb'. The notebook interface includes a menu bar with 'File', 'Edit', 'View', 'Insert', 'Runtime', 'Tools', 'Help', and 'Saving...'. Below the menu bar, there are tabs for '+ Code' and '+ Text'. The code cell contains the following Python code:

```
x = 5  
y = "John"
```

The output of the code cell shows the datatypes of the variables:

```
The datatype of x is int (integer).  
The datatype of y is str (string).
```

Q2) Check whether the following syntax is **valid** or **invalid** for naming a variable. ?

Example: `abc=100` #valid syntax

- 1) `3a=10`
- 2) `@abc=10`
- 3) `a100=100`
- 4) `_a984_=100`
- 5) `a9967$=100`
- 6) `xyz-2=100`

`3a = 10` → **Invalid** (Variable names can't start with a digit).

`@abc = 10` → **Invalid** (Variable names can't start with special characters like @).

`a100 = 100` → **Valid** (It starts with a letter, and contains letters and numbers).

a984_ = 100 → **Valid** (Variable names can start with an underscore _).

a9967\$ = 100 → **Invalid** (Variable names can't contain special characters like \$).

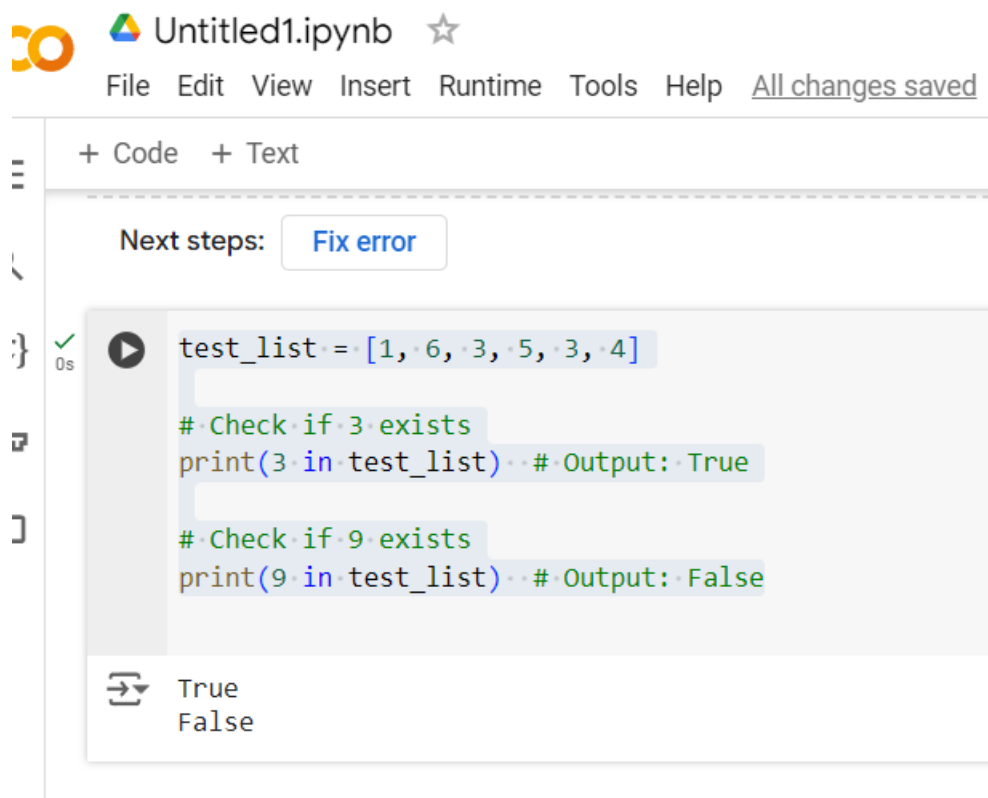
xyz-2 = 100 → **Invalid** (Variable names can't contain hyphens -).

Q3) Check if an element exists in the list in Python.

list = test_list = [1, 6, 3, 5, 3, 4]

1) Check if **3** exist or not.

2) Check if **9** exists or not.



The screenshot shows a Jupyter Notebook titled 'Untitled1.ipynb'. The interface includes a menu bar with 'File', 'Edit', 'View', 'Insert', 'Runtime', 'Tools', 'Help', and 'All changes saved'. Below the menu bar, there are tabs for '+ Code' and '+ Text'. The main area displays a code cell with the following Python code:

```
test_list = [1, 6, 3, 5, 3, 4]

# Check if 3 exists
print(3 in test_list) # Output: True

# Check if 9 exists
print(9 in test_list) # Output: False
```

Below the code cell, the output is displayed as:

```
True
False
```

Q4) Take the user **input** to print the current date?

+ Code + Text

```
from datetime import datetime

# Getting current date and time
current_date = datetime.now()

# Displaying current date
print("Current Date: ", current_date.strftime("%Y-%m-%d"))
```

Current Date: 2024-09-18

Q5) What is the **output of the following code?**

a) print 9//2

b) print 9%2

```
# a) Integer division
print(9 // 2) # Output: 4 (9 divided by 2 gives 4.5, but integer division returns the floor value)

# b) Modulus operation
print(9 % 2) # Output: 1 (9 divided by 2 leaves a remainder of 1)
```

4
1

Q6) Print the **First 10 Natural Numbers using a while loop.**

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

1
2
3
4
5
6
7
8
9
10

Q7) Write a program to accept a **number from a user** and calculate the **sum of all numbers from 1 to a given number**.

Example= if the user entered **10** the output should be

55 (1+2+3+4+5+6+7+8+9+10)

```
# Taking user input
num = int(input("Enter a number: "))

# Calculating sum
total_sum = sum(range(1, num + 1))

# Displaying result
print("Sum of numbers from 1 to", num, "is:", total_sum)
```

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

Q8) Write a Python program that iterates the integers from **1** to **50**. For multiples of **three** print "**Fizz**" instead of the number and for multiples of **five** print "**Buzz**". For numbers that are multiples of both **three** and **five** print "**FizzBuzz**"?

Example:

FizzBuzz

1

2

Fizz

4

Buzz

+ Code + Text

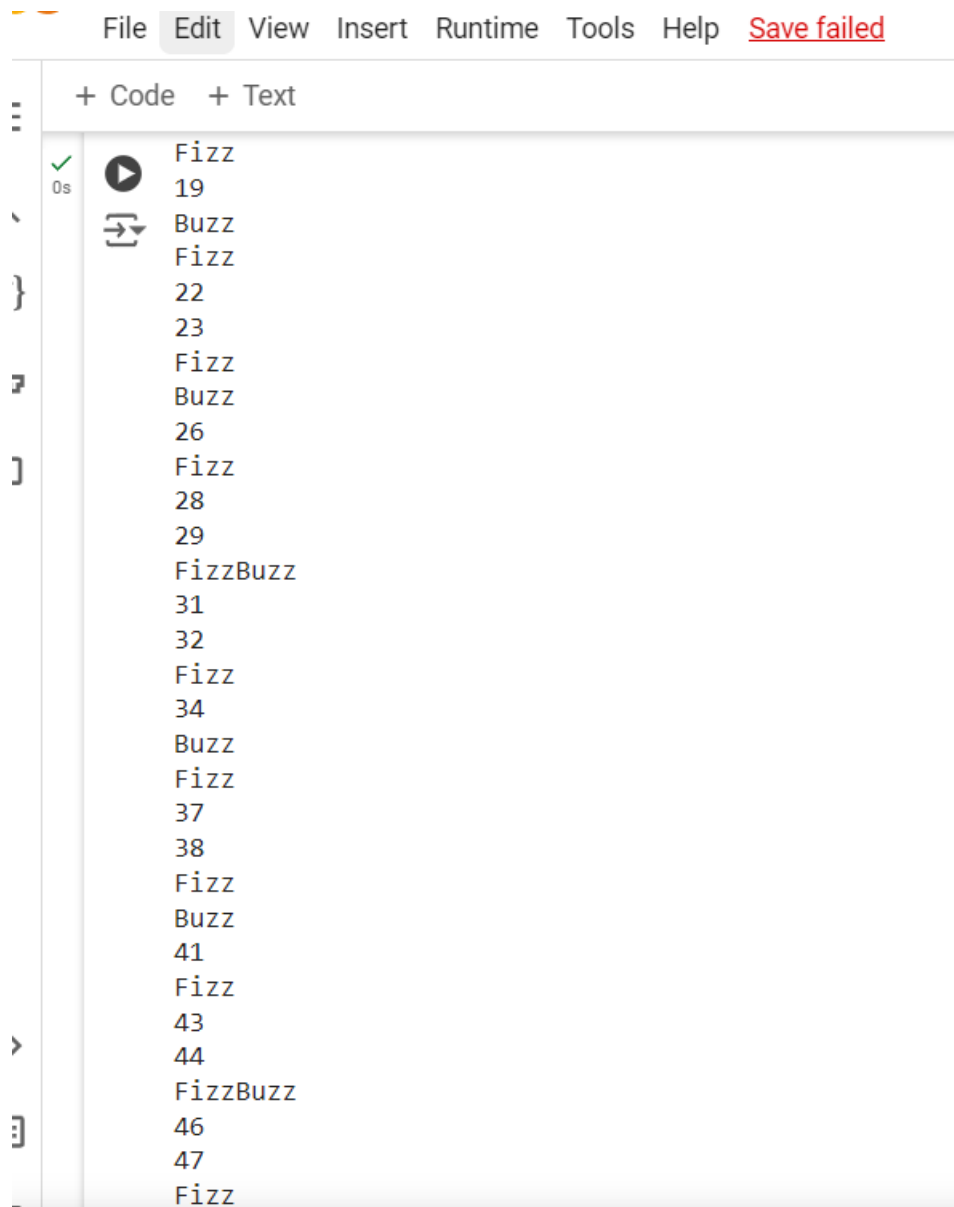
✓
0s



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



```
1  
2  
Fizz  
4  
Buzz  
Fizz  
7  
8  
Fizz  
Buzz  
11  
Fizz  
13  
14  
FizzBuzz  
16  
17
```



```
File Edit View Insert Runtime Tools Help Save failed
+ Code + Text
✓ 0s 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
```