Variables and Assignments

Variables and Assignments

❖ Variables represent labelled storage location who is values can be manipulated during program run.

Student = 'Champak'

Age = 16

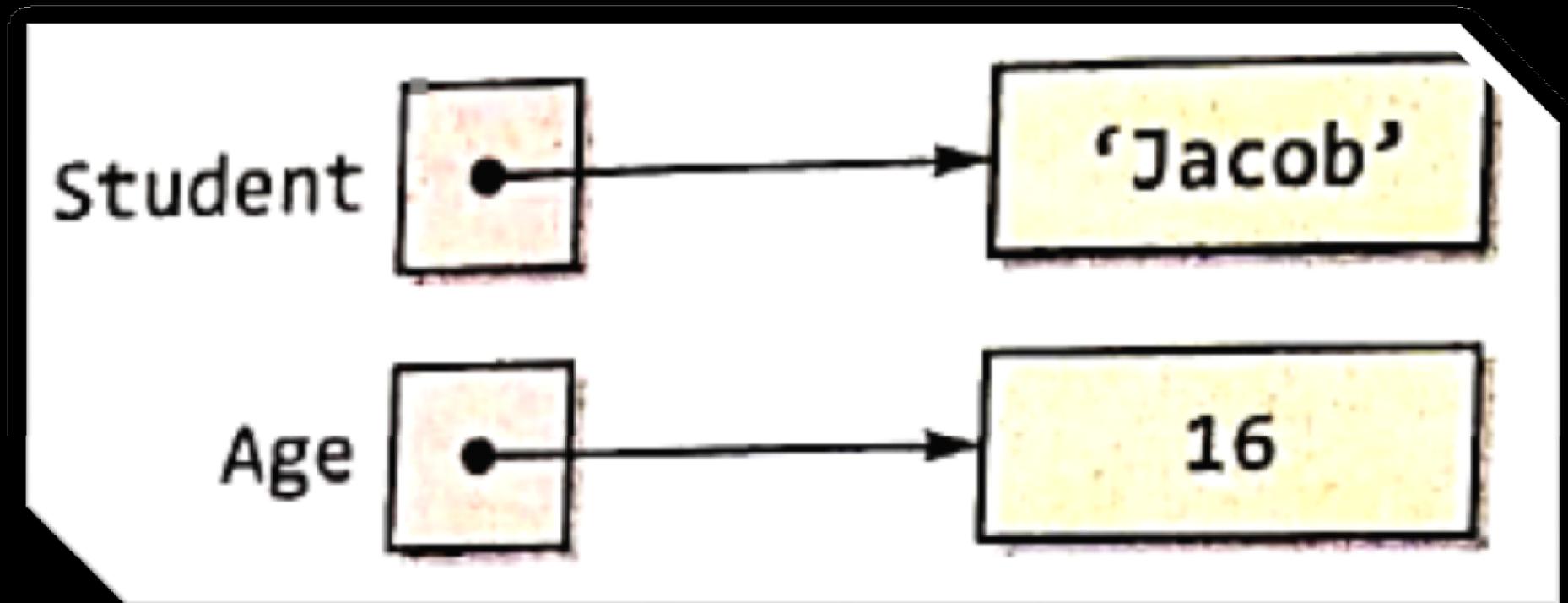# 001 Simple Program

```python
a=10
b=20.50
c='hello'
print(a)
print(b)
print(c)
```

Variables and Assignments

▸ Python in internally create labels referring to these values as shown below.

002 VARIABLE AND ASSIGNMENT

```python
student="ABHINAV"

age=17

school='KV 4'

print(student)

print(age)

print(school)
```

Dynamic Typing

Dynamic Typing

❖ A variable is defined by assigning to it some value (of a particular type such as numeric, string etc.)

❖ e.g.,   x = 10

            print (x)

            x = "hello world"

            print (x)

003 DYNAMIC TYPING

```python
x=10
y=20
print(x)
print(y)
x="Hello world"
print(x)
y="Helo Universe"
print(y)
```
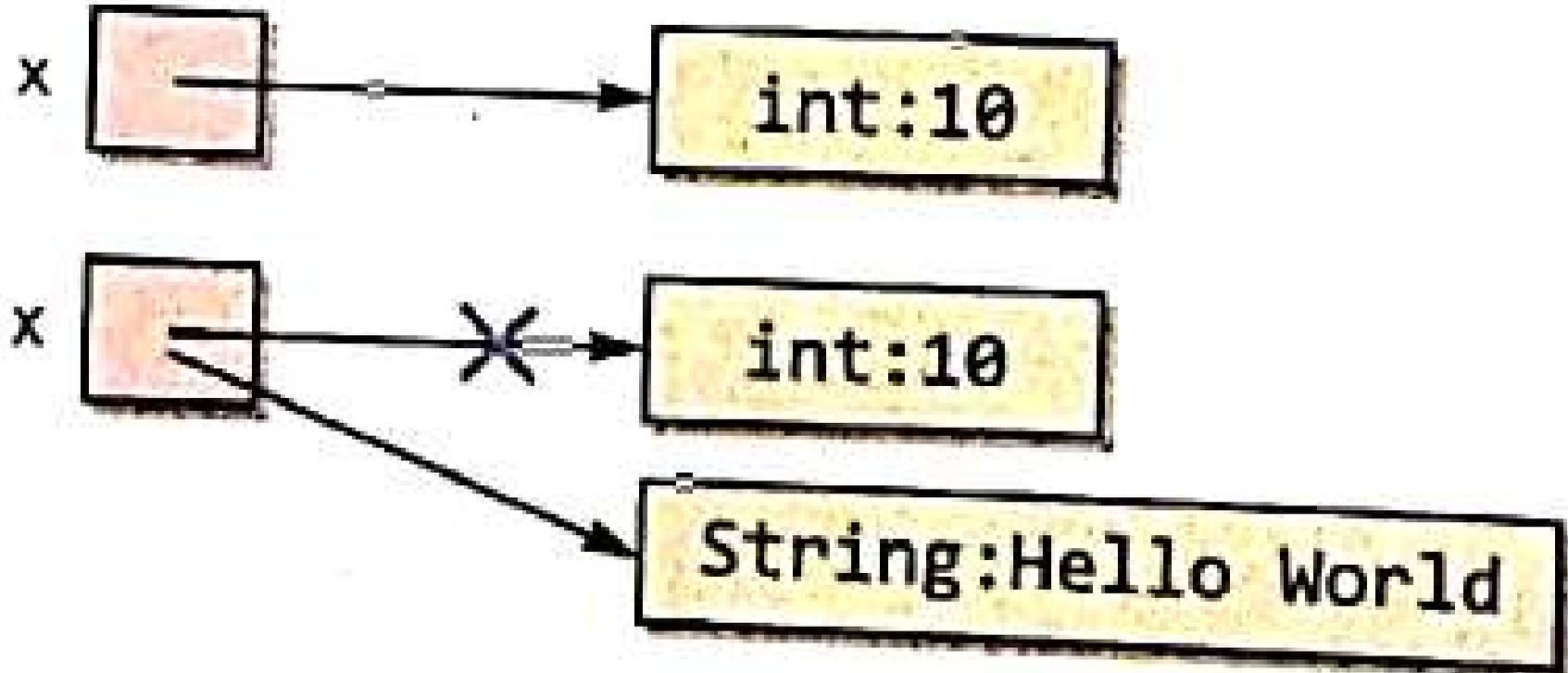
Dynamic Typing

❖ So, you can think of python variables as labels associated with objects (literal values in our case here) ; with dynamic typing, python Makes a label refer to new assignment.

```
X = 10
:
X = "Hello World"
```

Dynamic Typing

❖ Dynamic typing is different from Static typing.

❖ In static typing, a data typing is attached with a variable when it is defined first and it is fixed.

❖ That is, data typing of a variable cannot be changed in static typing whereas there is no such restriction in dynamic typing, which is supported by python

Multiple Assignments

Multiple Assignments

❖ Python is very versatile with assignment.

1. Assigning same value to multiple variables.

You can assign same value to multiple variables in a single statement, e.g.,

$$a = b = c = 10$$

It will assign value 10 to all three variables a, b, c.

004 MULTIPLE ASSIGNMENT

```python
a=b=c=10

print("Value of a is ")

print(a)

print("Value of b is ")

print(b)

print("Value of c is ")

print(c)
```

Multiple Assignments

2. Assigning multiple values to multiple variable.

you can even assign multiple values to multiple variables in single statement e.g.,

x, y, z = 10,20,30

▸ If you want to swap values of X and y u just need to write as follows

x,y = y,x

005 MULTIPLE ASSIGNMENT

```python
x,y,z=10,20,30
print("Value of x is ")
print(x)
print("Value of y is ")
print(y)
print("Value of z is ")
print(z)
```

006 MULTIPLE ASSIGNMENT - SWAPING

```python
x=10

y=20

x,y=y,x

print("Value of x ")

print(x)

print("Value of y ")

print(y)
```

PYTHON TEST – 1.4

VARIABLE & ASSIGNMENTS