|  |  |  |
| --- | --- | --- |
|  |  | Day 2 |
|  |  | Variables and operators |
|  |  | Creating a variable |
| In | [13]: | a **=** "apple"  print(a) |

apple

# A variable name must start with a letter or the underscore character

Rule no 1

In [18]:

swati\_student **=** 25 print(swati\_student)

25

In [20]:

my\_name\_is\_swati **=** 56 print(my\_name\_is\_swati)

56

\_ **=** 3

print(\_)

In [22]:

3

\_swati **=** 2.3 print(\_swati)

In [24]:

2.3

# A variable name cannot start with a number

In [27]:

1 **=** "apple" print(1)

**Cell In[27], line 1**

**1 = "apple"**

**^**

**SyntaxError:** cannot assign to literal here. Maybe you meant '==' instead of '='?

1/3

Day 2

In [31]:

1\_swati **=** "laptop" print(1\_swati)

**Cell In[31], line 1 1\_swati = "laptop"**

**^**

**SyntaxError:** invalid decimal literal

In [36]:

swati\_1 **=** "laptop" print(swati\_1)

laptop

In [34]:

56\_a **=** 5.6

print(56\_a)

**Cell In[34], line 1 56\_a = 5.6**

**^**

**SyntaxError:** invalid decimal literal

# A variable name can only contain alpha- numeric characters and underscores (A-z, 0-9, and \_ )

In [40]:

*$***%@ =** 25 print(*$***%@**)

**Cell In[40], line 1**

**$%@ = 25**

**^**

**SyntaxError:** invalid syntax

In [42]:

swati**@ =** 3

print(swati**@**)

**Cell In[42], line 1 swati@ = 3**

**^**

**SyntaxError:** invalid syntax

# Variable names are case-sensitive (age, Age and AGE are three different variables)

In [45]:

age **=** 40

Age **=** 25

AGE **=** 69

In [49]:

print(Age)

25

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# A variable name cannot be any of the Python keywords.

In [52]:

print **=** 25 print(print)

**---------------------------------------------------------------------------**

**TypeError** Traceback (most recent call last) Cell **In[52], line 2**

1 print = 25

**----> 2** print(print)

**TypeError**: 'int' object is not callable

In [54]:

int **=** 14 print(int)

**---------------------------------------------------------------------------**

**TypeError** Traceback (most recent call last) Cell **In[54], line 2**

1 int = 14

**----> 2** print(int)

**TypeError**: 'int' object is not callable

# Operators

Addition Operators

In [58]:

A variable name cannot be any of the Python keywords**.**

**---------------------------------------------------------------------------**

**TypeError** Traceback (most recent call last) Cell **In[58], line 3**

1 a = 3

2 b = 9

**----> 3** print(a+b)

**TypeError**: 'int' object is not callable

In [ ]:

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# Operators Additipn operators

a **=** 6

b **=** 2

print(a**+**b)

In [4]:

8

In [6]:

a **=** 6.8

b **=** 2.6

print(a**+**b)

9.4

In [12]:

a **=** "swati"

b **=** "student" print(a**+**" "**+**b)

swati student

In [14]:

comp1 **=** 2**+**3j comp2 **=** 3**+**5j

print(comp1**+**comp2)

(5+8j)

# Subtraction operator

In [19]:

a **=** 6.8

b **=** 2.2

print(a**-**b)

4.6

In [21]:

a **=** "apple"

b **=** "cat" print(a**-**b)

**---------------------------------------------------------------------------**

**TypeError** Traceback (most recent call last) Cell **In[21], line 3**

1. a = "apple"
2. b = "cat"

**----> 3** print(a-b)

**TypeError**: unsupported operand type(s) for -: 'str' and 'str'

# multiplication operator

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In [26]:

a2 **=** 25.5

b2 **=** 4

print(a2**\***b2)

102.0

In [28]:

a2 **=** "dog" b2 **=** 4

print(a2**\***b2)

dogdogdogdog

In [30]:

a2 **=** "dog" b2 **=** "cat"

print(a2**\***b2)

**---------------------------------------------------------------------------**

**TypeError** Traceback (most recent call last) Cell **In[30], line 3**

1. a2 = "dog"
2. b2 = "cat"

**----> 3** print(a2\*b2)

**TypeError**: can't multiply sequence by non-int of type 'str'

# DIvison operator

In [37]:

a **=** 5

b **=** 2

print(a**/**b)

2.5

In [39]:

a **=** 5

b **=** 2

print(a**//**b)

2

# Modulous operator

In [42]:

a **=** 19

b **=** 3

print(a**%b**)

1

# Exponent operator

In [45]:

a **=** 5

print(a **\*\*** 4)

625

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|  |  |  |
| --- | --- | --- |
| 2/5/25, 7:34 PM | | Untitled  Boolean Operator |
| In | [48]: | a **= True**  b **= False**  print(type(a)) |

<class 'bool'>

# Comparison operator

In [67]:

x **=** 5

y **=** 5

print(x **>=** y)

True

In [53]:

x **=** 5

y **=** 30

print(x **>** y)

False

In [55]:

x **=** 5

y **=** 5

print(x **==**y)

True

In [61]:

x **=** 5

y **=** 3

print(x **!=** y)

True

# Logical operator and operator

x **= True**

y **= False**

print( x **and** y)

In [73]:

False

In [75]:

x **= False**

y **= True**

print( x **and** y)

False

In [77]:

x **= True**

y **= True**

print( x **and** y)

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True

In [81]:

x **= False**

y **= False**

print( x **and** y)

False

# or operator

In [87]:

x **= True**

y **= False**

print( x **or** y)

True

In [89]:

x **= True**

y **= True**

print( x **or** y)

True

In [91]:

x **= False**

y **= False**

print( x **or** y)

False

# not oeprator

In [94]:

x **= True**

print(**not** x)

False

In [96]:

x **= False**

print(**not** x)

True

In [ ]:

You are working **for** a travel agency, **and** customers want to convert their Indian

Assume 1 USD **=** 83 INR**.**

Write a Python program that takes an amount **in** INR **and** converts it to USD**.**solve

In [104…

*# Exchange rate*

exchange\_rate **=** 83 *# 1 USD = 83 INR*

*# Taking input for amount in INR*

amount\_in\_inr **=** float(input("Enter amount in INR: "))

*# Converting INR to USD*

amount\_in\_usd **=** amount\_in\_inr **/** exchange\_rate

*# Displaying the result*

print(f"Converted amount in USD: {amount\_in\_usd:.2f}")

Converted amount in USD: 30.13

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In [ ]:

you are working **as** an HR analyst **in** a company**.** The company gives a basic salary

A house rent allowance (HRA) of 20**%** of the basic salary**.** A medical allowance (MA) of 10**%** of the basic salary**.**

A tax deduction of 5**%** of the total salary**.**

Write a Python program that takes the basic salary **as** input **and** calculates the n

In [ ]:

*# Taking input for basic salary*

basic\_salary **=** 25000

*# Calculating allowances*

hra **=** 0.20 **\*** basic\_salary *# House Rent Allowance (HRA)*

ma **=** 0.10 **\*** basic\_salary *# Medical Allowance (MA)*

*# Calculating gross salary*

gross\_salary **=** basic\_salary **+** hra **+** ma

*# Calculating tax deduction*

tax **=** 0.05 **\*** gross\_salary

*# Calculating net salary*

net\_salary **=** gross\_salary **-** tax

*# Displaying results*

print(f"Gross Salary: {gross\_salary:.2f}")

print(f"Net Salary after tax deduction: {net\_salary:.2f}")

In [ ]:

In [ ]: