WELCOME TO

CODE WITH REDOY

PYTHON PRIVATE BATCH - 01

Today's Agenda -1 Sep 22

01 Course Introduction

02 Folder Making

03 Compiler installation

04 Your first code by Python

05 Python Variables

06 Python Comments

07 Python Data Types

08 Python Numbers

CODE WITH REDDY

REMINDER

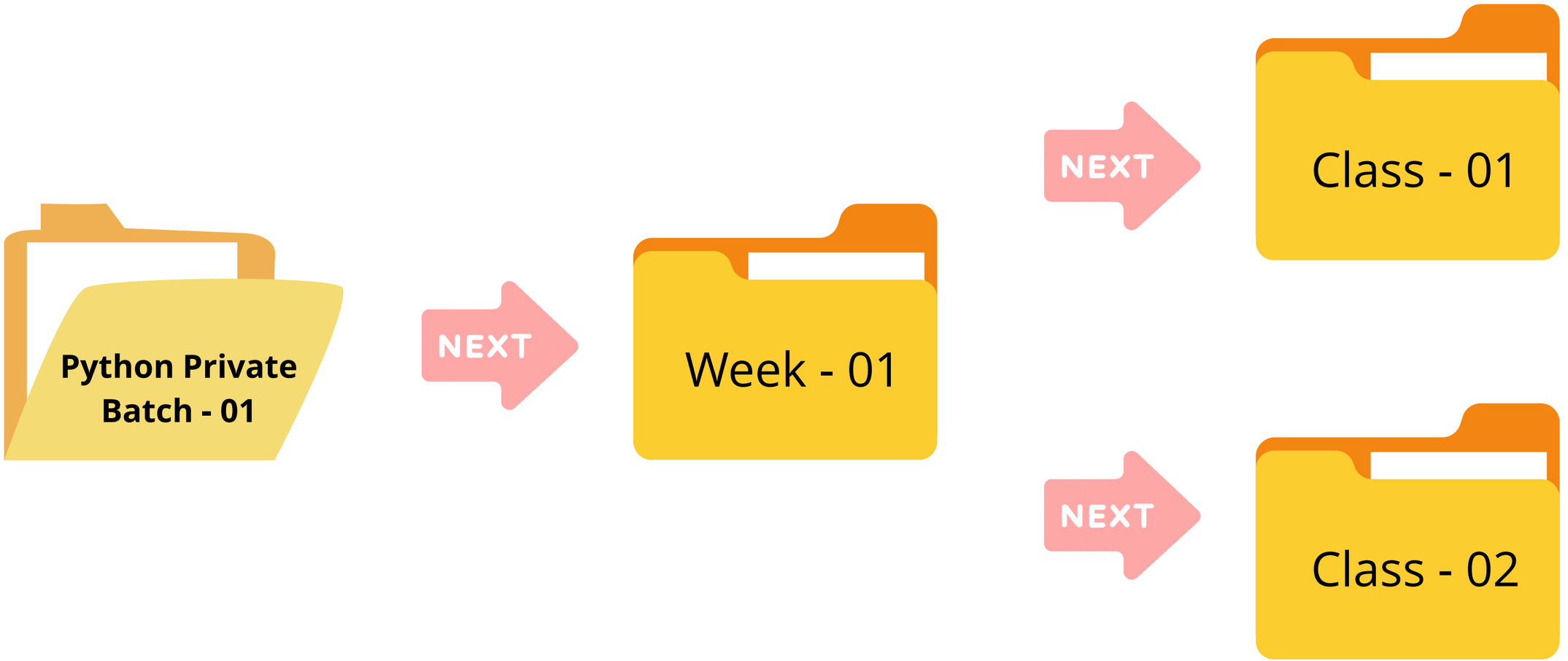
May I request everyone to turn off their Messenger, Facebook, and Instagram?

Thank you!

Course Introduction

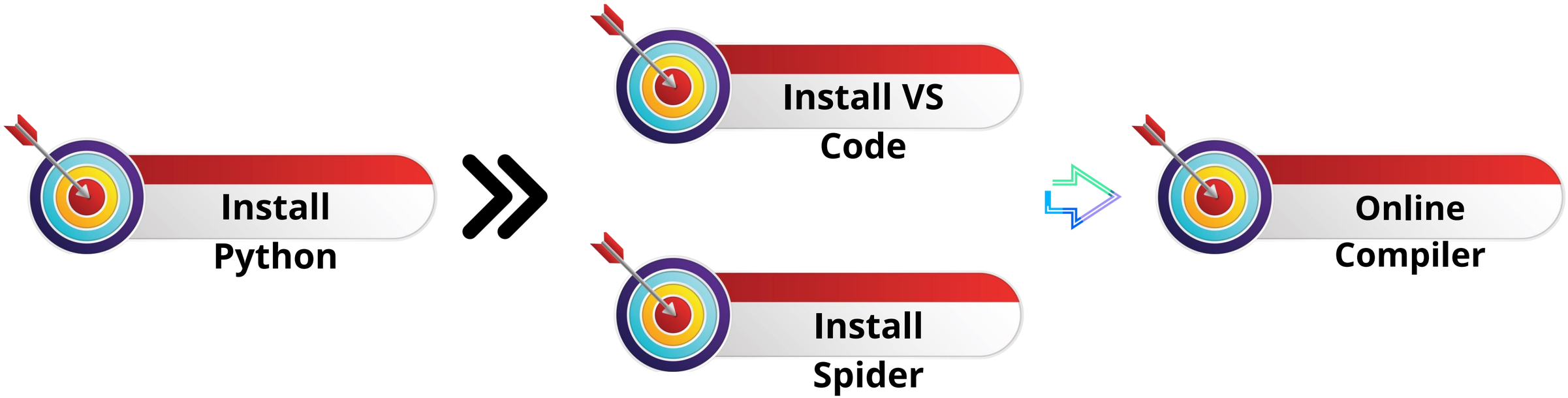
Folder Making

Folder Making



Compiler Installation

Compiler Installation



Your first code by Python

Python
Variables

Python Variables

- A variable name must start with a letter or the underscore character
- A variable name cannot start with a number
- A variable name can only contain alpha-numeric characters and underscores (A-z, 0-9, and _)
- Variable names are case-sensitive (age, Age and AGE are three different variables)

Legal variable names:

```
myvar = "John"
my_var = "John"
_my_var = "John"
myVar = "John"
MYVAR = "John"
myvar2 = "John"
```

Illegal variable names:

```
2myvar = "John"
my-var = "John"
my var = "John"
```

Python Variables – Multi Words

Camel Case

Each word, except the first, starts with a capital letter:

```
myVariableName = "John"
```

Pascal Case

Each word starts with a capital letter:

```
MyVariableName = "John"
```

Snake Case

Each word is separated by an underscore character:

```
my_variable_name = "John"
```

Python Variables – Assign Multiple Values

Many Values to Multiple Variables

```cpp
#include<iostream>
using namespace std;
int main(){
    int x, y, z;
    x = 10;
    y = 20;
    z = 30;
    cout<< x <<" "<< y <<" "<< z<< endl;
}
```

1.py

Week - 01 > Code > 1.py > ...

```python
x, y, z = 10, 20, 30
print(x, y, z)
```

```
PS H:\Contest
10 20 30
PS H:\Contest
```

Python Variables – Assign Multiple Values

One Value to Multiple Variables

2.cpp 1.cpp

01 > Code > 2.cpp

```cpp
#include<iostream>
using namespace std;
int main(){
    int x, y, z;
    x = 10;
    y = 10;
    z = 10;
    cout<< x <<" "<< y <<" "<< z<< endl;
}
```

```
PS C:\Users\hrido\OneDrive\Code With Redoy
p -o 2 } ; if ($?) { .\2 }
10 10 10
PS C:\Users\hrido\OneDrive\Code With Redoy
```

```python
x = y = z = 10
print(x, y, z)
```

Python Variables – Assign Multiple Values

Unpack a Collection

```cpp
#include<bits/stdc++.h>
using namespace std;
int main(){
    string names[3] = {"Code", "With", "Redoy"}, x, y, z;

    x = names[0];
    y = names[1];
    z = names[2];

    cout<<x<<endl <<y<<endl <<z<<endl;
}
```

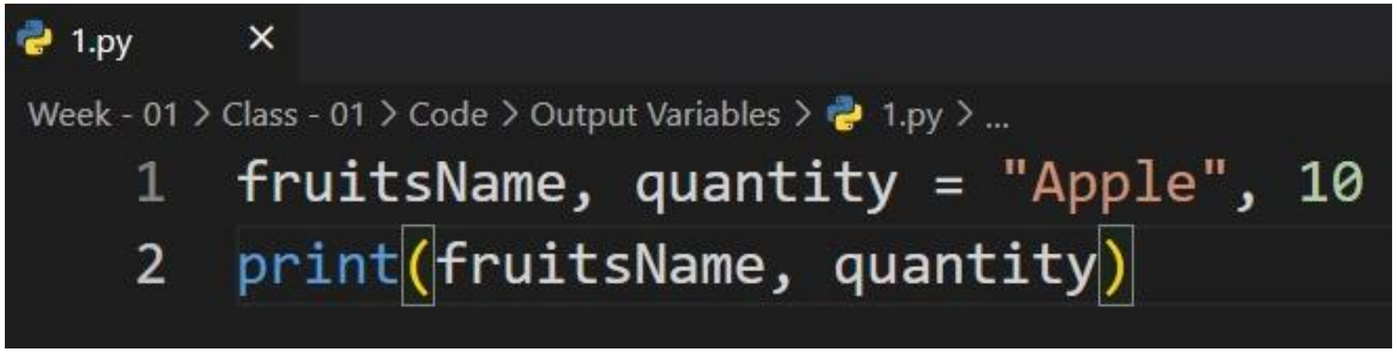
Week - 01 > Code > 3.py > ...

```python
names = ["Code", "With", "Redoy"]
x, y, z = names
print(x)
print(y)
print(z)
```

```
PS C:\Users\hrido\C
p -o 3 } ; if ($?)
Code
With
Redoy
```

Python Variables – Output Variables

Python print() support different data types.




```
PS C:\Users\hrido\OneDrive\Code With Redoy
ut Variables\1.py"
Apple 10
PS C:\Users\hrido\OneDrive\Code With Redoy
```

Python
Comments

Python Comments

Single Line Comments

Week - 01 > Class - 01 > Code > Output Variables > 1.py

```
1  #fruitsName, quantity = "Apple", 10
2  print(fruitsName, quantity)
```

Double Line Comments

1.py Output Variables | 1.py Python Comments | 2.py

Python Comments > 2.py

```
1  """fruitsName, quantity = "Apple", 10
2  print(fruitsName, quantity)"""
```

Python *Data Types*

Python Data Types – type()


```
1  n1, n2 = 10, 10.25
2  typeN1 = type(n1)
3  typeN2 = type(n2)
4
5  print(typeN1)
6  print(typeN2)
```

```
PS C:\Users\hrido\One
<class 'int'>
<class 'float'>
```

Python Data Types

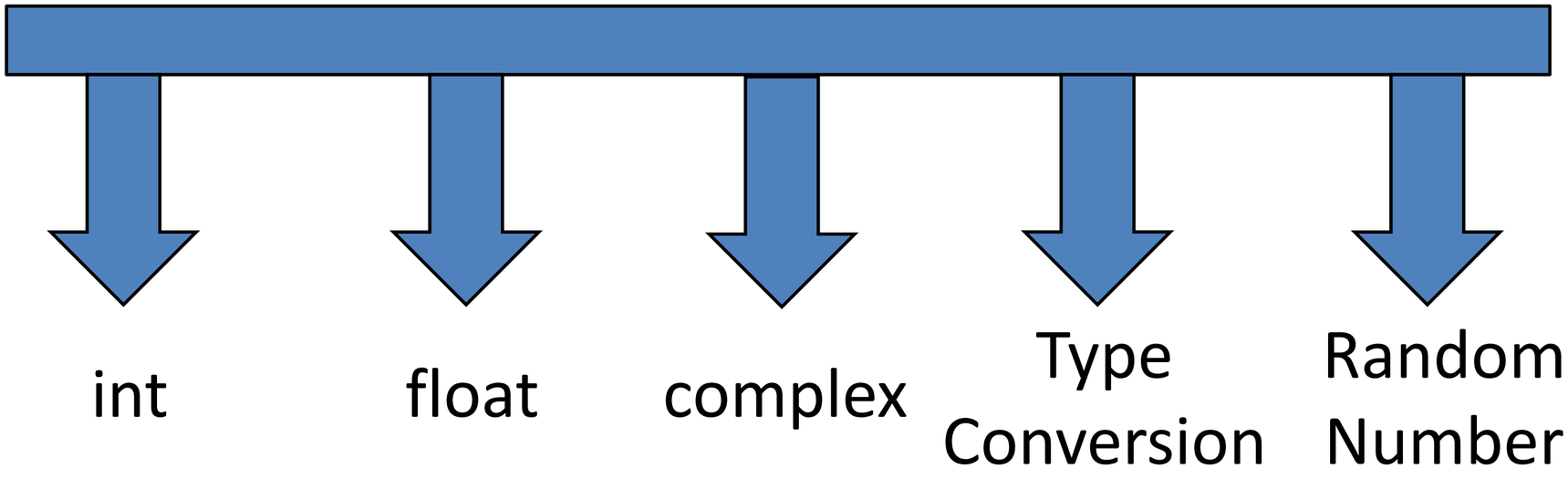
Python Data Types	
Text Type	str
Numeric Types	int, float, complex
Sequence Types	list, tuple, range
Mapping Type	dict
Set Types	set, frozenset
Boolean Type	bool
Binary Types	bytes, bytearray, memoryview
None Type	nonetype

Python Data Types

Website

Python
Numbers

Python Numbers



Today's Practice Problems = 1.5

01

Write a program to print your name and phone number along with comments.

02

Solve any problem with **Many Values to Multiple Variables format.**

03

Solve any problem with **One Value to Multiple Variables format.**

04

Print your first name, middle name, and last name with 3 variables **using + operator.**

05

Tell me something about the global variable.


Thank you!
Have
a good
weekend!

Today's Agenda
2 Sep 22

01 Python Type Casting

02 P.P (Type casting) [2.5]

03 Python Strings

04 P.P (string) [3.5]

05 User Input

06 Python Booleans

07 Python Operators

08 Assignment of Week - 01

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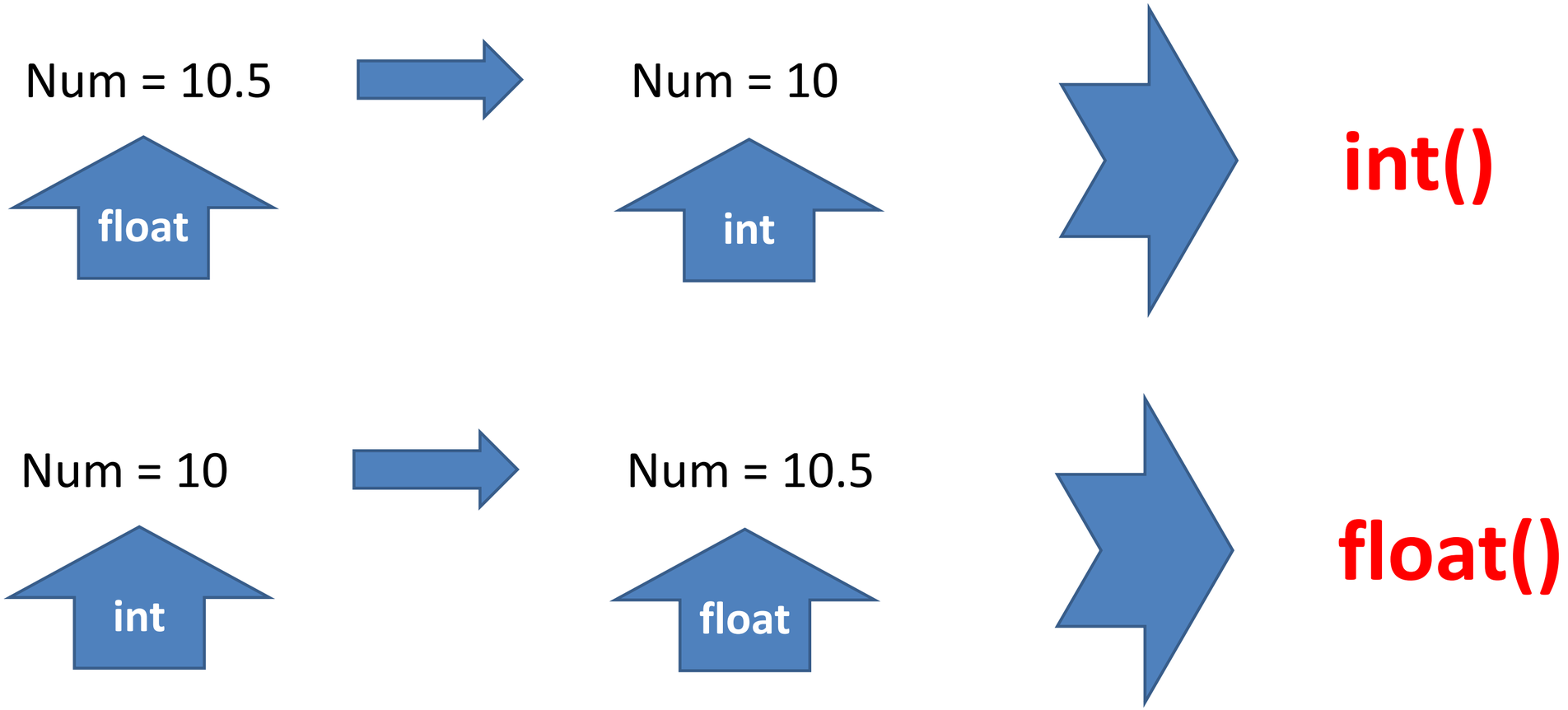
Python Type Casting

Python Type Casting



Practice Problem – 2.5

1. Let's assume a number x that is a non-negative floating point number. Print its integer part using the appropriate function.

2. Let's assume a number x that is divisible by 2. Divide it by 3 and print it. Then check it's type and print this type.

3. n1 = "20" and n2 = "10". Print the sum of these two numbers which will be 30.

4. Let's assume a nonpositive number that won't be divisible by 2. Convert it to string and print the type and string.

5. n1 = "20" and n2 = "10".
Change the type of these two numbers and do the required calculation so that the output will be 2010

Python Strings

Practice Problem – 3.5

1. s = "Shikkhangon BD"
   1. Slice BD and print it.
   2. Slice han and print it.

2. S="Your Name"
   1. Print your first name using reverse slice.
   2. Print your first name and last name using reverse slice in a single variable.

3. S="Code With Redoy"
   Slice With and Redoy and store respectively in a and b. Then print the concatenation of these two variables.

4. Let's take an example that S is your first name and s is your last name.
   Let's slice first two and three words respectively from S and s. Then print the concatenation result of S and s.

5. Solve Q4. again using reverse slicing method.

User Input

Python
Booleans

Python Operators

Python Operators

1. Arithmetic operators
2. Assignment operators
3. Comparison operators
4. Logical operators
5. Identity operators
6. Membership operators
7. Bitwise operators

Python Operators - Arithmetic operators

Operator	Name	Syntax or formula	Example
+	Addition	x + y	20 + 10 = 30
-	Subtraction	x – y	20 – 10 = 10
*	Multiplication	x * y	20 * 10 = 200
/	Division	x / y	20 / 10 = 2
%	Modulus	x % y	20 % 10 = 0
**	Exponentiation	x ** y	5 ** 2 = 25
//	Floor division	x // y	5 // 3 = 1

Python Operators – Assignment Operators

Operator	Example	Same As	Output
=	X = 5	x = 5	5
+=	X += 3	x = x + 3	X = 5 + 3 = 8
-=	X -= 2	x = x - 2	X = 5 – 2 = 3
*=	X *= 2	x = x * 2	X = 5 * 2 = 10
/=	X *= 2	x = x / 2	X = 5 / 2 = 2.5
%=	X %= 2	x = x % 2	X = 5 % 2 = 1
//=	X //= 2	x = x // 2	X = 5 // 2 = 2
**=	X **= 2	x = x ** 2	X = 5 ** 2 = 25
&=	X &= 3	x = x & 3	X = 5 & 3 = 1
|=	X |= 3	x = x | 3	X = 5 | 3 = 1
^=	X ^= 3	x = x ^ 3	X = 5 ^ 3 = 6
>>=	X >>= 3	X = x >> 3	X = x >> 3 =
<<=	X <<= 3	X = x << 3	X = x << 3 =

Python Operators – Right Shift(>>) Operator

Assignment of Week - 01

1. Sammi and Sumiya are two best friends Sammi guesses a *non-negative floating point number* that *devisable by 2*. Now set this number in a variable and convert it to a string. Now Sumiya guesses this same number and converts it into an integer making it double. **Print the result.**

2. Chef and Chefina are a very romantic couple. Today they will play a game. The game is very simple. The first chef will tell a number to Chefina that will be stored in a double quotation. The job of Chefina is to double that number and that will be divisible by 2. Then subtract any number from Chefina's number that will be greater than 0. **Print the number.**

3. Sammi and Sumiya are two best friends. Sammi guesses a number that is not divisible by 2 and Sumiya guesses the opposite. Suddenly Sumiya got angry with Sammi. So she wants to divide Sammi's number by her number.
Now find out the result respectively int type, float type, and string type.

4. Chef and Chefina are talking about the perimeter of a rectangle. Chef asks Chefina if I provide the length and breadth of a rectangle, can you find the perimeter of that rectangle? So now your job is to make a program that can find out the perimeter of any rectangle **where length and breadth should be taken from the user.**

5. Can you make a program for me that can convert the temperature Fahrenheit to Centigrade and centigrade to Fahrenheit.

Assignment of Week - 01

6. Write a program to enter length and breadth of a rectangle and find its perimeter.

7. Write a program to enter length and breadth of a rectangle and find its area.

8. Write a Program to calculate area of an equilateral triangle.

9. Write a program to enter length and breadth of a rectangle and find its area.

10. Write a program to compute the perimeter and area of a circle with a given radius.

11. Write a program to find the third angle of a triangle if two angles are given.

12. Write a program to perform addition, subtraction, multiplication, and division of two numbers.

13. Write a Program to enter marks of five subjects and calculate total, average and percentage.

14. Write a Program that takes minutes as input and display the total number of hours and minutes.

15. Write a program to convert specified days into years, weeks, and days.

16. Write a program that accepts an employee's ID, total worked hours of a month and the amount he received per hour. Print the employee's ID and salary (with two decimal places) of a particular month.

17. Write a program to find power of any number x ^ y.

18. Write a program to enter any number and calculate its square root.

19. Write a program to find power of any number x ^ y (using pow() function).

20. Write a program to calculate a bike’s average consumption from the given total distance (integer value) traveled (in km) and spent fuel (in liters, float number – 2 decimal point.


Thank you!
Have
a good
weekend!