LESSON 2

main.py

```
score = 88.456
print(f"{score:.1f}")
# 88.5
```

Py

Variables & Strings

Learn it all @MyWebUniversity



A FREE MYWEBUNIVERSITY COURSE

PYTHON SCRIPTING & OOP

LESSON 2

Variables, Numbers and Strings

Dynamic typing, int, float, bool, str, f-strings and string methods

Variables and Dynamic Typing

vars.py

```
total_score = 95          # int
average = 88.5            # float
name = "Mariam"           # str
passed = True             # bool
nothing = None            # no value
print(type(average))      # <class 'float'>
```

- A variable is a name for a value. You do not declare a type: Python looks at the value. The …
- Use lowercase names with underscores, like total_score. type shows what kind of value a …

01

Numbers and Math

Expression	Result	Note
`7 / 2`	`3.5`	always float
`7 // 2`	`3`	floor division
`7 % 2`	`1`	remainder
`2 ** 100`	`1267650600…`	no overflow
`round(3.14159, 2)`	`3.14`	round

- Python has whole numbers, called int, with no size limit, and decimals called float. Slash …
- Percent gives the remainder, double star is power, and round, abs and the math module do …

02

Strings and f-strings

fstrings.py

```
name, score, money = "Ahmad", 88.456, 1250000
print(f"{name} scored {score:.1f}")       # Ahmad scored 88.5
print(f"Budget: {money:,} AFN")           # Budget: 1,250,000 AFN
print(f"{name:<10}|{score:>8.2f}|")       # aligned columns
msg = """Line one
Line two"""
```

- Strings go in single or double quotes, and triple quotes span many lines. Put f before the …
- f-strings can also format: a colon followed by dot two f shows two decimals, and a comma …

03

String Methods

Code	Result
`"  Kabul ".strip()`	`'Kabul'`
`"a,b,c".split(",")`	`['a', 'b', 'c']`
`"-".join(["2026", "10", "24"])`	`'2026-10-24'`
`"Herat"[0] · "Herat"[-1]`	`'H' · 't'`
`"Mazar-i-Sharif"[:5]`	`'Mazar'`

- Strings come with many methods: upper, lower, strip, replace, split, join, startswith and …
- Strings are immutable, so methods return a new string. Use square brackets to index and …

04

Converting Types

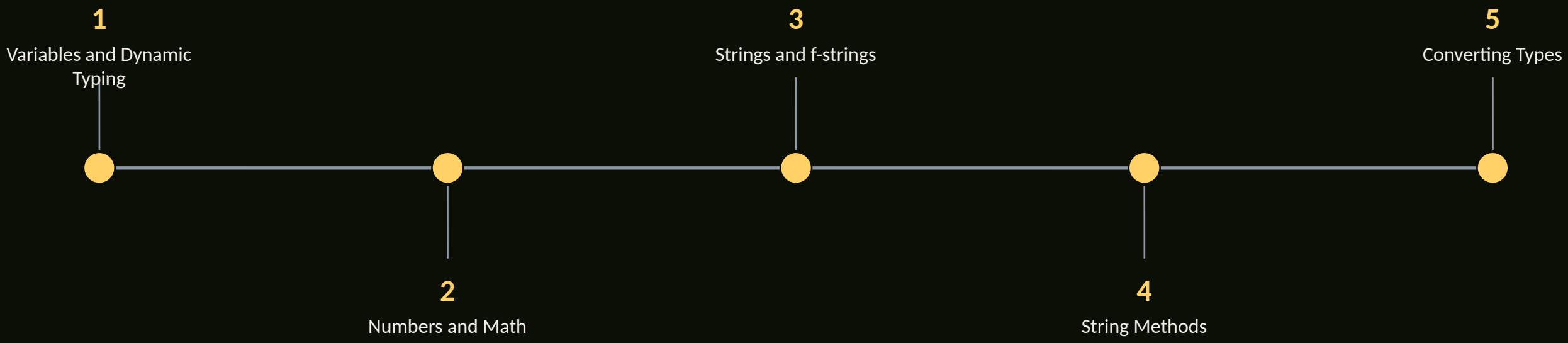
convert.py

```
age = int(input("Age: "))          # "21" -> 21
price = float("99.50")             # 99.5
label = "Total: " + str(42)        # 'Total: 42'
int("abc")                         # ValueError!
bool(""), bool("hi"), bool(0)      # False True False
```

- input always returns a string, so convert it with int or float before doing math. str turns …
- Converting bad text raises a ValueError, which we will learn to catch in the files and …

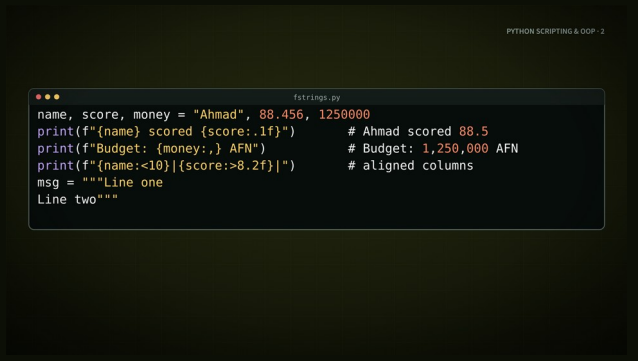
05

Lesson Map


1
Variables and Dynamic Typing
2
Numbers and Math
3
Strings and f-strings
4
String Methods
5
Converting Types

Sources and Further Reading





Thank you for watching

MyWebUniversity.com

Free technical education since 2000 — English and Dari

@MyWebUniversity · @MyWebUniversity-Dari