

# Day 3: Python Intro





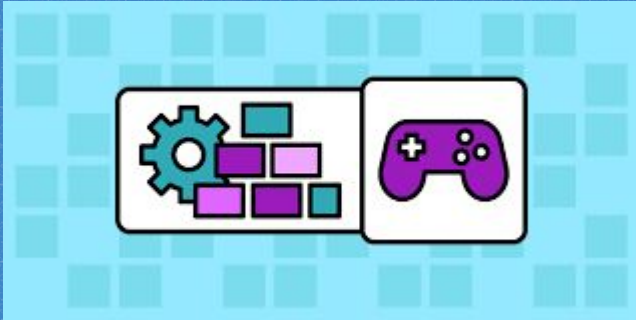


# 1

# Application



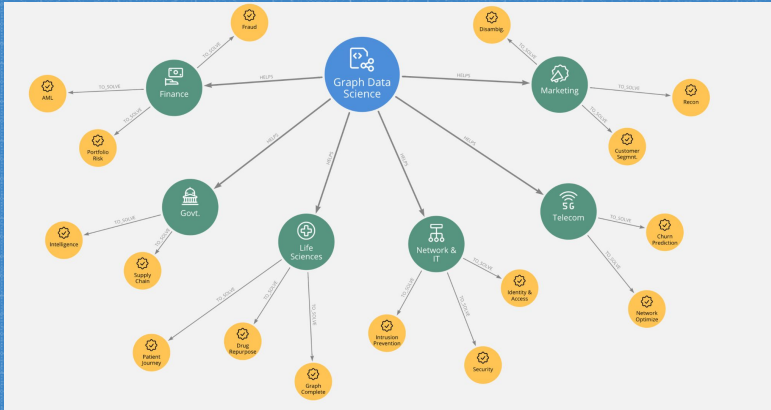
# Web/App/Game Development



# AI



# Data Science



# Automation





2

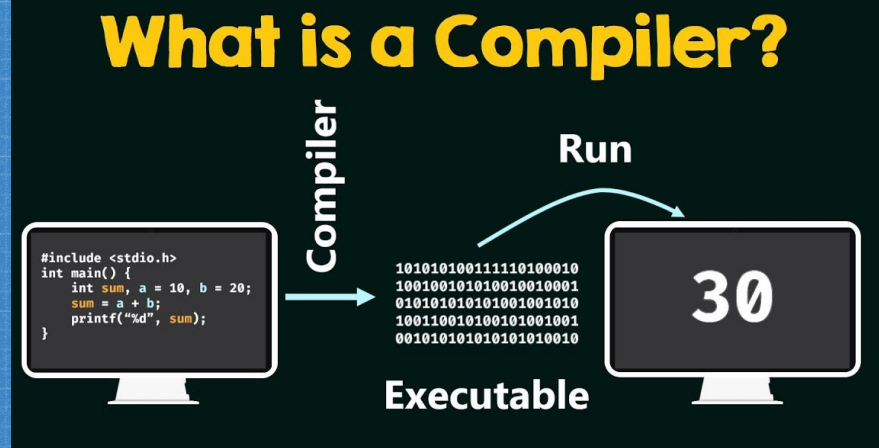
## How it works





# Text to Binary

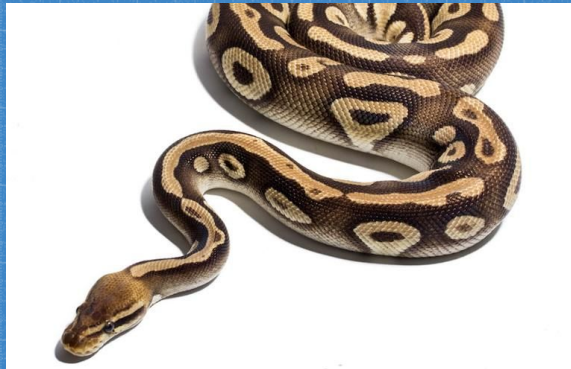
- Computers understand binary (0s, 1s)
- You must give exact instructions!





3

# Setup, Variables, Strings

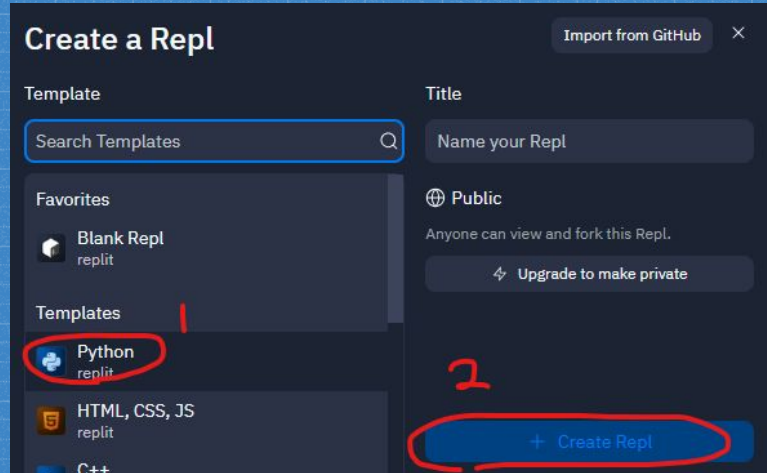
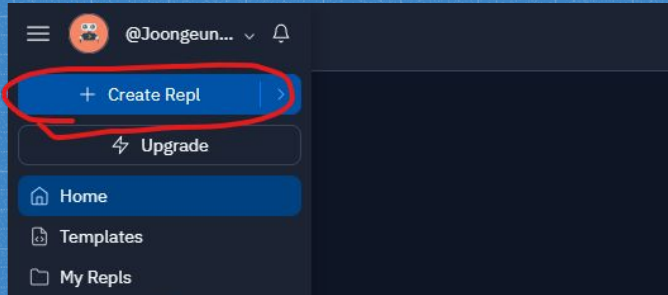




# Create a file

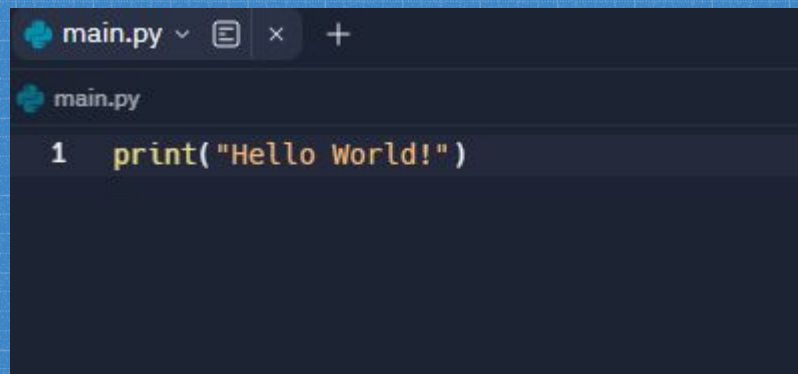
1. Go to: replit.com and make a new account
2. Open python file

Sign Up

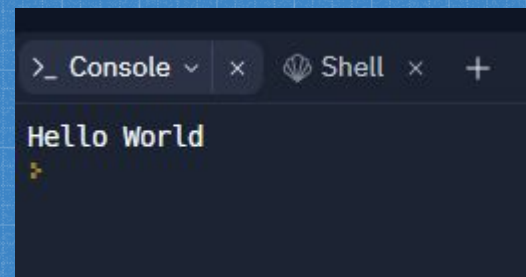




# Print



A code editor window with a dark theme. The title bar shows 'main.py' with a dropdown arrow, a document icon, a close button, and a plus button. The editor content shows a single line of Python code: `1 print("Hello World!")`.



A console window with a dark theme. The title bar shows '>\_ Console' with a dropdown arrow, a close button, a shell icon, and a plus button. The console content shows the output 'Hello World' followed by a cursor.



# Variables

```
main.py ▾ [icon] × +  
main.py  
1 a = 10  
2 b = "Hello World"  
3 c = 3.14159265  
4 d = True  
5 e = False  
6 print(type(a), type(b), type(c), type(d), type(e))
```

What is int, str,  
float, bool??

```
>_ Console ▾ × [icon] Shell × +  
<class 'int'> <class 'str'> <class 'float'> <class 'bool'> <class 'bool'>  
✚ □
```



# Data Types

**int:** integer (-2147483648 through 2147483647)

**float:** decimal

**str** (string): text

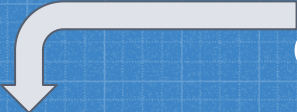
**bool** (boolean): True/False

Other types: list, dict, set, etc.



# Operations

Use  
comments!



```
1 #Example 1
2 print(4 * 6 + 3) # 27
3
4 #Example 2
5 a = 4
6 b = 6
7 c = 3
8 print(a * b + c) # 27
```

type: int

What will  
this print?

```
#Example 3 (What will this print?)
a = 4
b = 6
c = 3
d = 2
print(((a * b)/c - c)**d) |
```

type: float

(from '//')



# String Operations/Debugging

#Example 4

```
a = "3"
```

```
b = "6"
```

```
print(a * b)
```



## Error Message:

```
Traceback (most recent call last):  
  File "main.py", line 22, in <module>  
    print(a * b)  
TypeError: can't multiply sequence by non-int of type 'str'
```



### #Example 4

```
a = "3"
```

```
b = "6"
```

```
print(a + b)
```

```
print(a * 10)
```

>\_ Console ▾ ×

Shell × +

36

3333333333





#Example 5

a = 3

b = 4

a = a + b + 1

print(a)

print(b)



# 4

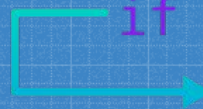
## Conditionals





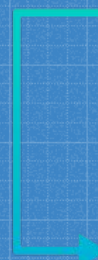
## Condition is True

```
number = 10  
if number > 0:  
    # code  
  
else:  
    # code  
  
# code after if
```

A red arrow originates from the 'if' statement, loops around its left side, and points directly to the indented '# code' line, indicating that the code inside the if block is executed when the condition is true.

## Condition is False

```
number = -5  
if number > 0:  
    # code  
  
else:  
    # code  
  
# code after if
```

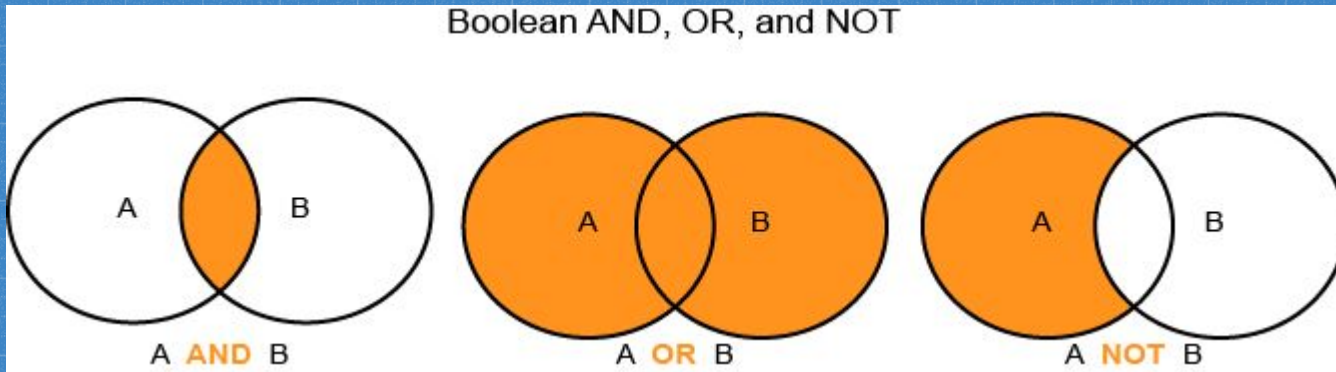
A red arrow originates from the 'if' statement, loops around its left side, and points directly to the 'else:' line, indicating that the code inside the else block is executed when the condition is false.



- '=' vs. '==':

```
1  # '=' vs. '=='
2  a = 4
3  if a == 3:
4      print("a is 3")
5  elif a == 4:                # This conditional is True
6      print("a is 4")         # This line is printed
7  else:
8      print("a is not 3 or 4")
```

- and, or, not (boolean operators):





# Let's Practice!

<https://codingbat.com/python/String-1>