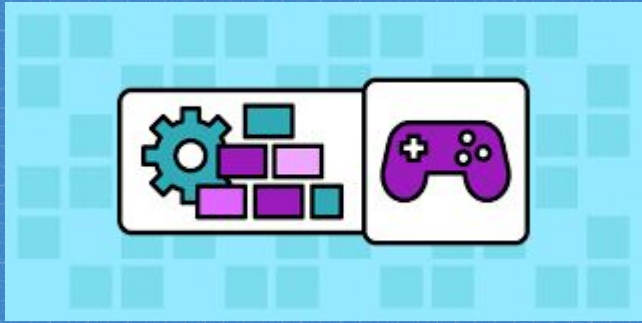
Day 3:
Python Intro

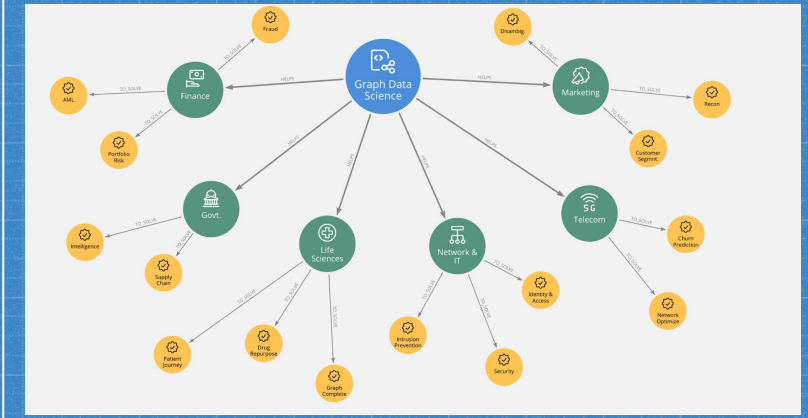
1 Application

Web/App/Game Development



AI

Data Science



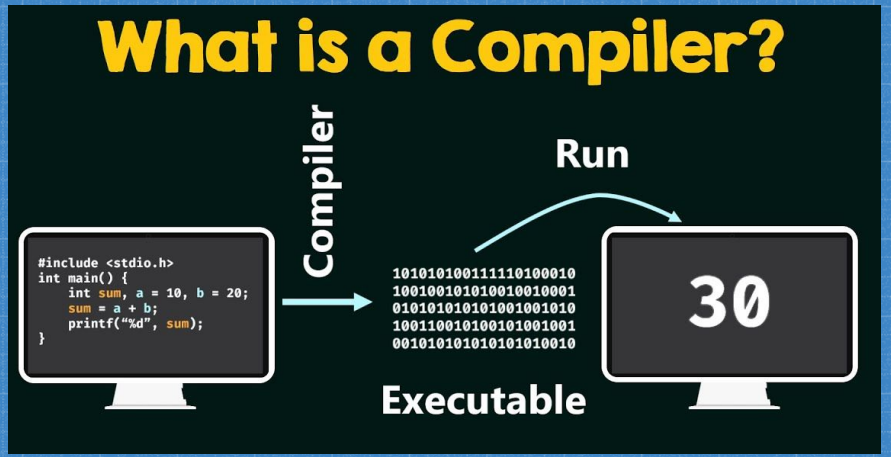
Automation

2

How it works

Text to Binary

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



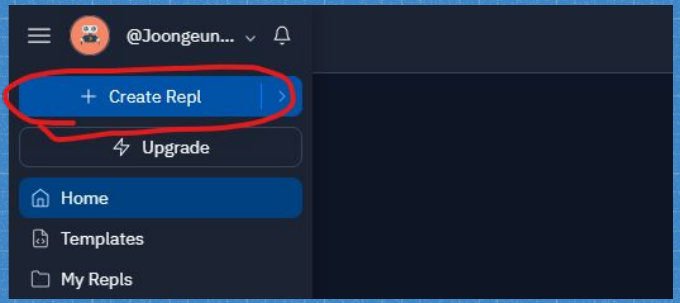
3

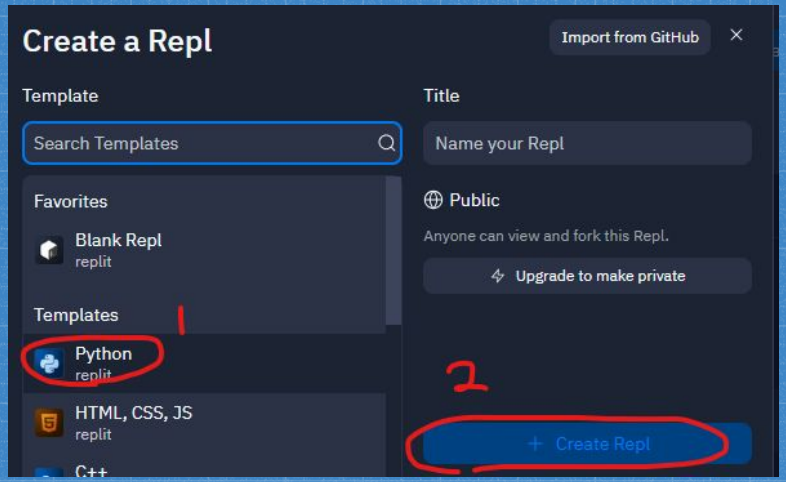
Setup, Variables, Strings

Create a file

1. Go to: replit.com and make a new account

2. Open python file





Print

main.py
main.py
1 print("Hello World!")
Run
Console
Shell
Hello World

Variables

main.py

```python
a = 10
b = "Hello World"
c = 3.14159265
d = True
e = False
print(type(a), type(b), type(c), type(d), type(e))
```

Console | Shell

```
<class 'int'> <class 'str'> <class 'float'> <class 'bool'> <class 'bool'>
```

What is int, str, float, 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 ‘/’)

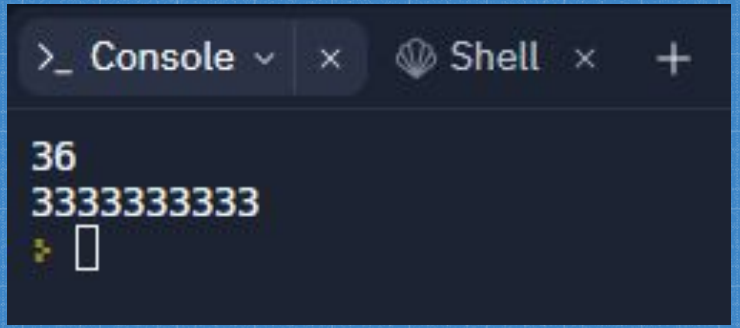
String Operations/Debugging

```
#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)
```



```
#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
```

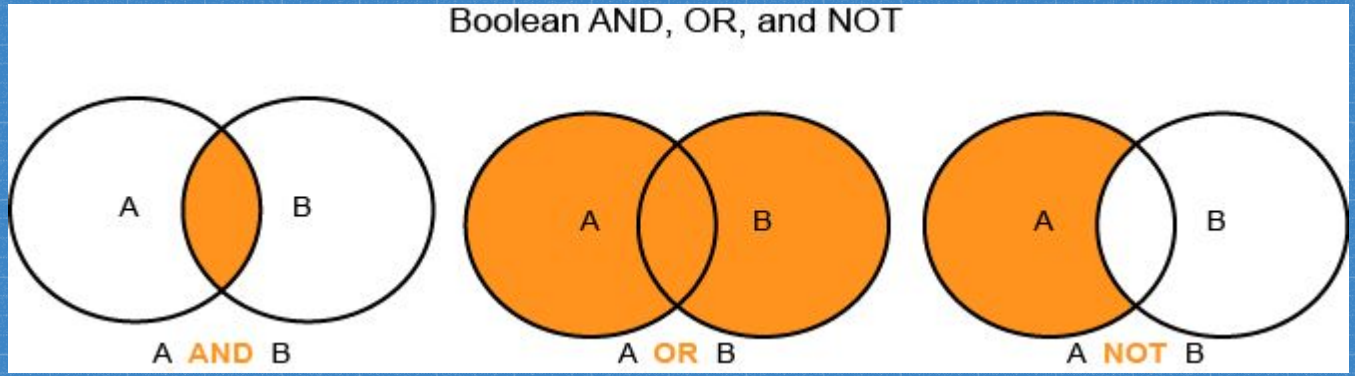
Condition is False

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

else:
    # code

# code after if
```

- ‘=’ 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