

INTRODUCTION TO GAME PROGRAMMING USING PYTHON

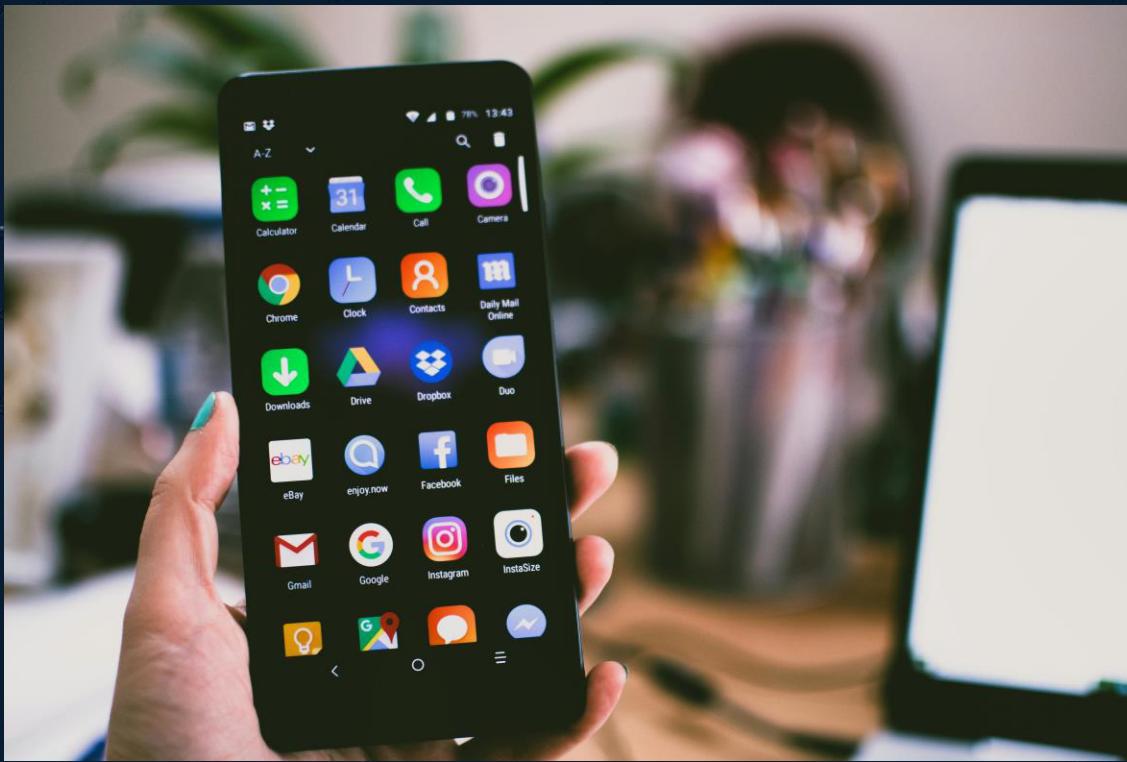
There are 4 impostors among us



MENTIMETER

HOW DOES YOUR
SMARTPHONE WORK?







HOW PROGRAMMING MAKES OUR LIFE BETTER



Social Media



GenAI (ChatGPT)



Google Search

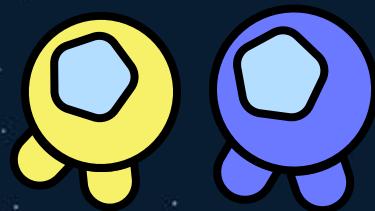
GAME PROGRAMMING

LEAGUE OF
LEGENDS

APEX
— LEGENDS —



BUT HOW?

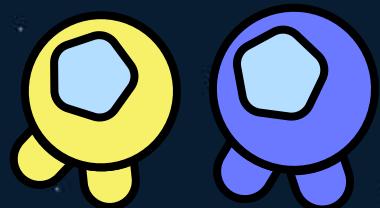


GAME PROGRAMMING



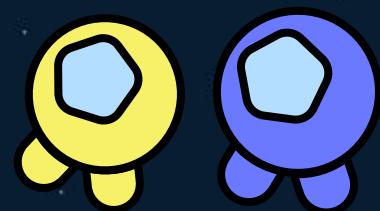
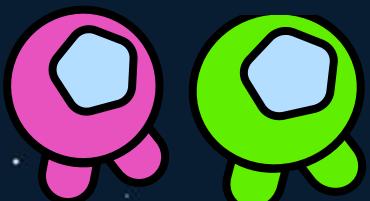
WHO "TAUGHT" THE COMPUTER?

PROGRAMMERS



HOW DO PROGRAMMERS TEACH THE COMPUTER?

PROGRAMMING LANGUAGES



PROGRAMMING LANGUAGES



Brian

What is a programming language?



Jack

A programming language is a set of instructions written by a programmer to deliver instructions to the computer to perform and accomplish a task.

PROGRAMMING LANGUAGES



Alice

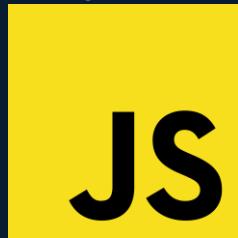
What is a programming language?



Computer

```
010001110110111101101111  
011001000010000001101010  
011011110110001000100001
```

PROGRAMMING LANGUAGES



PROGRAMMING LANGUAGES



Easy to read

Easy to learn

1ST STEP



CHARACTER CREATION

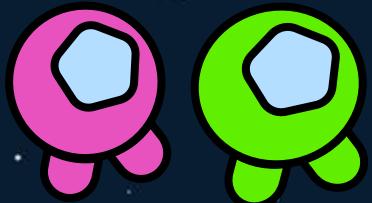
Name	
Gender	
Age	
Class	
Burial Gift	
Face Presets	
Build	
Appearance	

at Camera ⌂ :Help

Level	9
Vigor	12
Attunement	10
Endurance	9
Vitality	12
Strength	12
Dexterity	11
Intelligence	8
Faith	13
Luck	11



VARIABLES



VARIABLES



VARIABLES

```
variable_name = data
```

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`

DATA TYPES

str

int

STRING

str

STRING

""

"String"

"This is a string too"

"""

This
is
also
a
string

"""

INTEGER

int

INTEGER

1

-1324

10010101010011000010101010101

121321302949231758932750872130562098345621038947289472934723

EXAMPLE

HI 055031 000038



<https://trex-runner.com/>

STRING

```
name = "Dino"
```

```
name = 'Dino'
```

```
name = "Dino' # bad
```

INTEGER

```
speed = 1
```

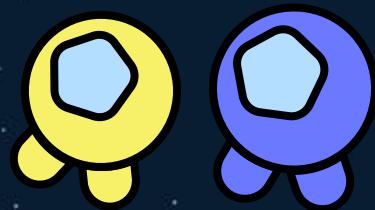
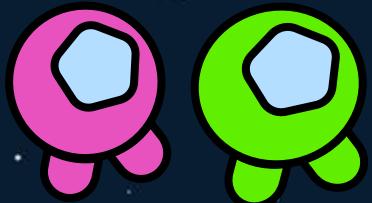
```
speed = 100
```

```
speed = 01 # bad
```

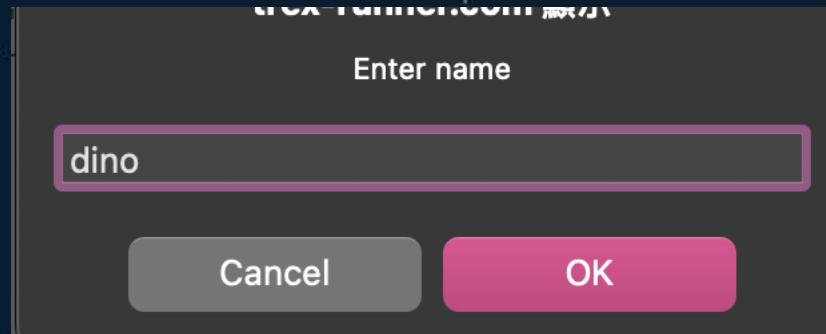
CREATE YOUR CHARACTER



INPUT/OUTPUT



INPUT()



INPUT()

input()

INPUT()

```
input("Enter name: ")
```

INPUT()

```
name = input("Enter name: ")
```

PRINT()

dino

mute



S

PRINT()

print()

PRINT()

```
print("dino")
```

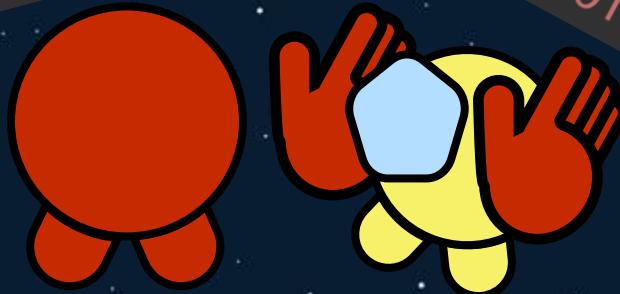
```
print('dino')
```

PRINT()

print(name)

GAME CHAT

`print("WHAT ARE YOU!")`



`print("AN IDIOT SANDWICH.")`

ARITHMETIC OPERATIONS



ARITHMETIC OPERATIONS

Symbol	Use
+	Plus
-	Minus
*	Multiply
/	Divide

ADDITION



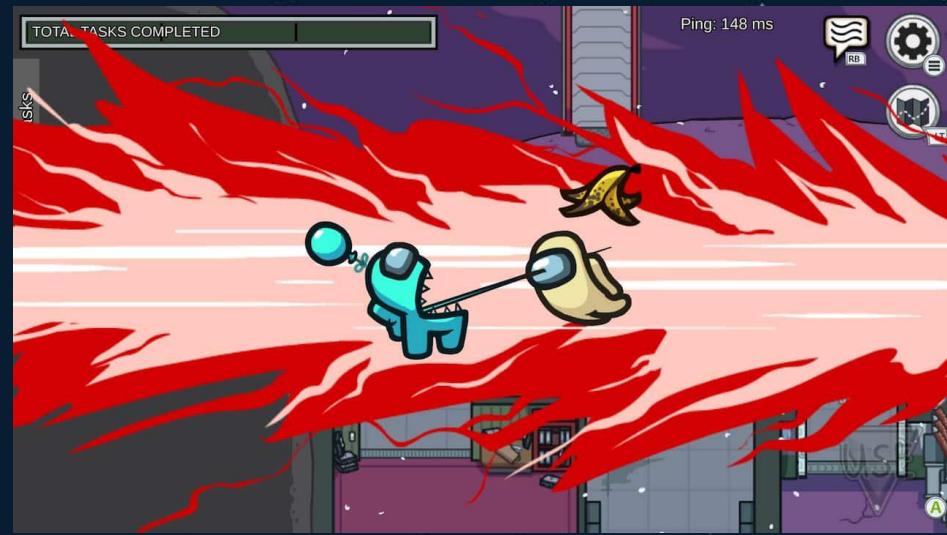
ADDITION

```
health = health + 25
```

```
diamond = diamond + 1
```

```
score = score + 2
```

SUBTRACTION



SUBTRACTION

```
pokeball = pokeball - 1
```

```
crewmate = crewmate - 1
```

```
health = health - 50
```

MULTIPLICATION



MULTIPLICATION

```
damage = damage * critical_hit
```

```
damage = damage * 2
```

```
drop_rate = drop_rate * fortune_level
```

DIVISION



DIVISION

```
head_damage = damage / helmet_level
```

```
magic_damage = magic_damage / magic_resist
```

```
damage = damage / armor_level
```

CHALLENGE

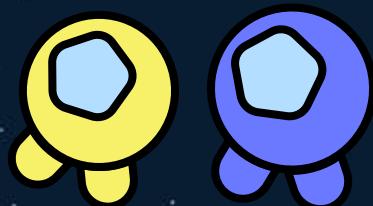
APEX LEGENDS



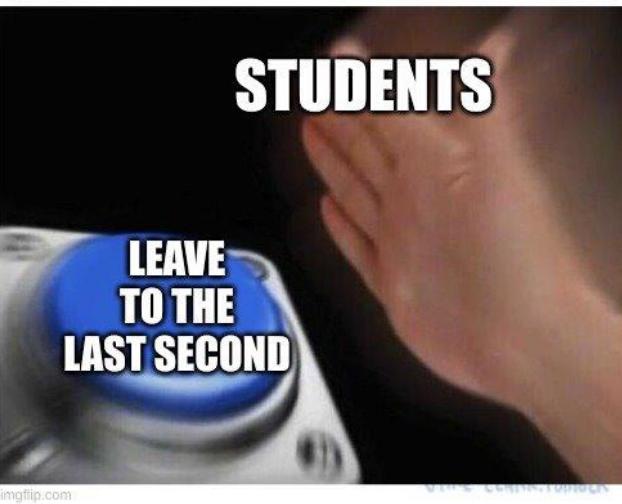
DECISION MAKING



THINK OF SOME DECISIONS
YOU MADE TODAY







STUDENTS

**LEAVE
TO THE
LAST SECOND**

WHAT TO DO?



WHAT TO DO?



IF - ELSE

I will walk if the traffic light is green, or else I will stop.

IF - ELSE

```
if traffic light == green:
```

Walk

```
else
```

Stop

IF - ELSE

I will walk **if** the traffic light is green, or **else** I will stop.

```
if traffic light == green:
```

Walk

```
else
```

Stop