Python Programming

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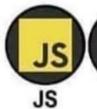
Яагаад Паятон хэл гэж?

- Сурч, ашиглахад хялбар
- Интернетийн орчин том хэмжээний Community -тай
- Томоохон корпорациудын дэмжлэгтэй
- Маш олон Library болон Framework-тэй
- Big data, Machine learning and Cloud computing
- First-choice Language
- Уянхатан

Web Developer













Python Ruby

Game Developer













Data Analysis









Desktop Developer







C++

Embedded System program







Python C++

Mobile Apps Development













Dart Objective-c Java

Python

swift

BASIC

```
10 INPUT A
20 INPUT B
30 C=A+B
40 PRINT C
```

RUN

C

```
#include <stdio.h>
int main(int argc, char*argv[])
{
    int a,b,c;
    scanf("%d",&a);
    scanf("%d",&b);
    c = a+b;
    printf("%d\n",c);
$ gcc -o add add.c
$ ./add
```

Java

```
import java.io.*;
public class Addup
    static public void main(String args[]) {
        InputStreamReader stdin = new InputStreamReader(System.in);
        BufferedReader console = new BufferedReader(stdin);
        int i1 = 0,i2 = 0;
        String s1,s2;
        try {
            s1 = console.readLine();
            il = Integer.parseInt(s1);
            s2 = console.readLine();
            i2 = Integer.parseInt(s2);
        catch(IOException ioex) {
            System.out.println("Input error");
            System.exit(1);
        catch(NumberFormatException nfex) {
            System.out.println("\"" + nfex.getMessage() + "\" is not
numeric");
            System.exit(1);
        System.out.println(i1 + " + " + i2 + " = " + (i1+i2));
        System.exit(0);
$ javac Addup. java
$ java Addup
```

Python

```
a = input()
b = input()
c = a + b
print c

$ python add.py
```

70 0H00

- Лабораторын ажил 10 * 3 = **30** оноо
- Явцын сорил 2 * 6 = **12** оноо
- Бие даалт 2 * 6 = **12** оноо
- Ирц идэвхи 0.5 * 16 * 2 = **16** оноо

Variables

- Хувьсагч тодорхойлох
- Хувьсагчийг дуудах
- Хувьсагчийн нэр давхардахгүй

```
distanceToLondonMiles = 403
mileToKm = 1.60934
distanceToLondonKm = distanceToLondonMiles * mileToKm
distanceToLondonKm
```

648.56402

```
marathonDistanceMiles = 26.219
marathonDistanceKm = marathonDistanceMiles * mileToKm
print(marathonDistanceKm)
```

42.19528546

Types

- Хувьсагчид нь үнэндээ төрөлтэй
- Үндсэн өгөгдлийн төрлүүд:

Usage	Example	Declaration	Type Declarat	
Numbers without decimal point	x = 124	int	Integer	
Numbers with decimcal point	x = 124.56	float	Float	
Used for text	x = "Hello world"	str	String	
Used for conditional statements	x = True or x = False	bool	Boolean	
Whenever you want an empty variable	x = None	None	NoneType	

Types

- Ялгаатай төрөлтэй хувьсагчдын хооронд арифметик үйлдэл хийж болохгүй
- type(x)

Casting types

- Ялгаатай төрлүүдийн хооронд төрөл хувиргалт хийж байж үйлдэл хийнэ.
- Төстэй функцууд: int(), float(), str()

```
x = 10  # This is an integer
y = "20"  # This is a string
x + int(y)
```

30

Quiz



```
x = "10"
y = "20"
x + y
```

Хариунь юувэ?

Quiz



```
x = "10"
y = "20"
x + y
```

Хариунь юувэ?

'1020'

Arithmetic operations

Математиктэй төстэй.

Үйлдлийн эрэмбэ нь

ИКИЛХЭН

Бас хаалт () ашиглана

Symbol	Task Performed	Example	Result
+	Addition	4 + 3	7
-	Subtraction	4 - 3	1
1	Division	7/2	3.5
%	Mod	7 % 2	1
*	Multiplication	4 * 3	12
//	Floor division	7 // 2	3
**	Power of	7 ** 2	49

Үйлдлийн эрэмбэ



64.0

Асуулт



VS

Comparision operators

Boolean утга буцаана

Нөхцөл шалгахад өргөн ашиглагддаг

ator C	Output
== y True if x and y have the same	value
!= y True if x and y don't have the same	value
< y True if x is less	than y
> y True if x is more	than y
= y True if x is less than or equ	al to y
>= y True if x is more than or equ	al to y

Comparison examples

```
x = 5 # assign 5 to the variable x

x = 5 # check if value of x is 5
```

True

Note that == is not the same as =

```
x > 7
```

Logical operators



_

Operation	Result
x or y	True if at least on is True
x and y	True only if both are True
not x	True only if x is False

	a	not a	a	Ь	a and b	a or b
F	alse	True	False	False	False	False
	True	False	False	True	False	True
			True	False	False	True
			True	True	True	True

Truth-table definitions of bool operations

Combining both

```
x = 14
# check if x is within the range 10..20
True and True
```

True

Combining both

```
x = 14
# check if x is within the range 10..20
( x > 10 ) and ( x < 20)
```

True