

## §1: R++

Custom language created in 2 months with breaks. Now it is in active development and syntax changes all the time.

## §2 Syntaxes

There are specific syntaxes.

`float a = 0.5421; // ';' → at the end of line`

## §3 Functions

### §3.1 Variable types

int ⇒ just a number e.g: 5

float ⇒ decimal e.g: 5.55

string ⇒ text e.g: string a = "ttt" or string a = ttt

bool ⇒ true or false

### §3.2 Basic functions

input() ⇒ to write everything you want that corresponds to variable type

print() ⇒ output

### §3.3 Basic math functions

sqrt() ⇒ e.g.: sqrt(9) or print(sqrt(9)) ⇒ 3

module() ⇒ e.g: module(-9) or print(module(-9)); ⇒ 9

average() ⇒ e.g: average(2,3) or print(average(2,3)); ⇒ 2.5

round() ⇒ e.g: round(0.3245,2) or print(round(0.3245,2)); ⇒ 0.32

rand{type:range} ⇒ e.g: rand{int/float:30} or print(rand{int/float:30}); ⇒ random number from 0 to 30

### §3.4 How to use libraries?

There are two libraries: Math and Date.

include <library\_name>; ⇒ e.g: include <Math>;

exclude <library\_name>;, is useful if you don't need a library after a moment.

⇒ e.g: exclude <Math>;

### §3.5: Math-library functions

log(x) ⇒ log<sub>10</sub>(100) → 2

log<sub>a</sub>(x) ⇒ usable as: log<sub>2</sub>(4) → 2. You may choose the base

sin(), cos() and tan()

### §3.6 Date-library functions

now() ⇒ time and date at the moment of usage

yesterday() ⇒ yesterday's date

today() ⇒ today's date

tomorrow() ⇒ tomorrow's date

year() ⇒ current year

month() ⇒ current month number

day() ⇒ current day number  
hour() ⇒ current hour  
minute() ⇒ current minute  
second() ⇒ current second  
time() ⇒ current time  
day\_of\_week() ⇒ name of current day  
month\_name() ⇒ name of current month

### §3.7 Statements

if (condition):

```
{  
    //code...  
}
```

elif (condition):

```
{  
    //code...  
}
```

else:

```
{  
    //code...  
}
```

### §3.8 Loops

for (i/j/... → x/f/c/...; i/j/...++):

```
{  
    //code...  
}
```

### §3.9 Other

or, and, not ⇒ usable in conditions

#### §4.0 Hello World!

Hello World! is the first program that is written by beginners in several languages. In R++ that has 3 options:

Option 1:

```
string h = input();  
print(h);
```

Input: Hello World!

Output: "Hello World!"

---

Option 2:

```
print("Hello World!");
```

Output: Hello World!

---

Option 3:

```
hw();
```

Output: Hello World!