

Clouft设计文档

功能介绍：使用特定语法进行编译，输出为mcfunction，使得可以方便地进行算法书写。

基本语法

```
//这是注释
num a;
a = 1;
num b = 2;
string = 'a';
/*
这也是注释欸
*/
if(a == 1){
    b = 3;
}
num c;
for i in 0..5{
    c+=i;
}
while(c != 5){
    c-=1;
}
```

编译方式

1.变量定义

变量类型：

类型	类型中文
num	数字
const num	数字常量
string	字符串常量

示例源码编译：

```
num a;
a = 1;
num c = 1;
c = a;
a += 1;
a = c + 1;
a = c * 2;
string s = 'clouft';
//string项由于mc本身限制，固定为常量，暂时不编译，等到有需要的时候，在进行插入编译
```

编译结果:

```

# num a;
scoreboard players set a var 0
# a = 1;
scoreboard players set a var 1
# num c = 1;
scoreboard players set c var 1
# c = a;
scoreboard players operation c var = a var
# a += 1;
# 如果运算符后面含有常量则直接编译成add set之类
scoreboard players add a var 1
# a = c + 1;
# 如果运算符后面含有变量则先编译成 operation ,上面那个c = a也是这样。
scoreboard players set a var 0
scoreboard players operation a var += c var
scoreboard players add a var 1
# a = c * 2
# 如果遇到*或者/先设置一个temp临时变量,再进行计算
scoreboard players operation a var = c var
scoreboard players set temp system 0 //编译时先设置重置归0
scoreboard players set temp system 2
scoreboard players operation a var *= temp system

```

2.条件判断

示例编译源码:

```

num a = 5;
a = a + 1;
num c = 6;
if(a == 6){
    run("say stupid Bdbmzwsc");
}else if(a == c){
    run("say Bdbmzwsc is shit");
}
if(a < 10){
    run("say xiaowanggua kills Bdbmzwsc successfully!");
    run("say xiaowanggua win!");
}else{
    run("say xiaowanggua still kills Bdbmzwsc successfully!");
}

```

编译结果:

```

# num a =5;
scoreboard players set a var 5
# a = a + 1;
scoreboard players operation a var = a var
scoreboard players add a var 1
# num c = 6;
scoreboard players set c var 6

#if(a == 6){
#    run("say stupid Bdbmzwsc");
#}else if(a == c){
#    run("say Bdbmzwsc is shit");

```

```

#}
scoreboard players set if system 0
execute if score if system matches 0..0 if score a var matches 6..6 run say
stupid Bdbmzwsc
execute if score if system matches 0..0 if score a var matches 6..6 run
scoreboard players set if system 1
execute if score if system matches 0..0 if score a var = c var run say Bdbmzwsc
is shit
execute if score if system matches 0..0 if score a var = c var run scoreboard
players set if system 1
#if(a < 10){
#   run("say xiaowanggua kills Bdbmzwsc successfully!");
#   run("say xiaowanggua win!");
#}else{
#   run("say xiaowanggua still kills Bdbmzwsc successfully!");
#}
scoreboard players set if system 0
scoreboard players set temp system 0
scoreboard players set temp system 10

execute if score if system matches 0..0 if score if system < temp system run say
xiaowanggua kills Bdbmzwsc successfully!

execute if score if system matches 0..0 if score if system < temp system run say
xiaowanggua win!

execute if score if system matches 0..0 if score if system < temp system run
scoreboard players set if system 1

execute if score if system matches 0..0 run say Bdbmzwsc is shit
execute if score if system matches 0..0 run scoreboard players set if system 1
#看着一段有点眼花很正常，因为我写的时候也很花

```

草烦死了，for更加烦，咕咕咕！国庆再写吧！