C语言 回顾

工欲善其事必先利其器

三大控制结构 for while if

```
int sum = 0;

for(int i = 0;i<size;i++){
        sum += i;
}

int i = 0;
while(i<size)
        sum += i;
        i++;
}
```

```
for(int i = 0;i<10;i++){
        if (i == 5)
                break;
}

for(int i = 0;i<10;i++){
        if (i > 7)
                continue;
}
```

特殊语句 i++ ++i

常见应用:

arr[i++] = 5;

arr[i] = 5;

i = i+1;

```c
int i = 1;
int j = i++;
printf("%d", j)
```

```c
int i = 1;
int j = ++i;
printf("%d", j)
```

```c
// i++
int temp;
temp = i;
i = i + 1;
return temp;
```

```c
// ++i
i = i + 1
return i
```

struct

```
#define MaxSize 50
typedef struct
{
    int arr[MaxSize];
    int length;
}SeqList;
```

```
typedef struct LNode{
    ElemType data;
    struct LNode *next;
}LNode, * LinkList
```

动态内存分配

```
// 请求系统分配 4 字节的内存空间,
// 并返回第一字节的地址, 然后赋给指针变量p
int *p = (int *)malloc(4);
free(p)
```

```
# include <stdlib.h>
void *malloc(unsigned long size);
void free (void* ptr);
```

```
L = (LinkList)malloc(sizeof(LNode));
```

引用

```
typedef struct LNode{
    ElemType data;
    struct LNode *next;
}LNode, * LinkList
```

```
int fun(LinkList &L)
```

特殊

```
int * p1,p2;
```

```
int *p1, *p2;
```