

# C Programming

## Day17.B

2017.11.10

structure

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```
#include <stdio.h>
```

```
typedef unsigned int UINT;
```

alias

new type

```
int main(void) {
```

```
    unsigned int u1 = 0xffffffff;
```

```
    UINT        u2 = 0xffffffff;
```

```
    printf("sizeof(unsigned int) = %ld \n", sizeof  
(unsigned int));
```

```
    printf("sizeof(UINT) = %ld \n", sizeof(UINT));
```

```
    if (u1>0) printf("u1 > 0 \n");
```

```
    if (u2>0) printf("u2 > 0 \n");
```

```
}
```

```
#define NEW 333
```

can use NEW  
instead of 333

Find-replace in an editor

# Struct Variable Declaration (1)

structure type

```
struct aaa {  
    int    i;  
    short  s;  
    char   c;  
};
```

definition

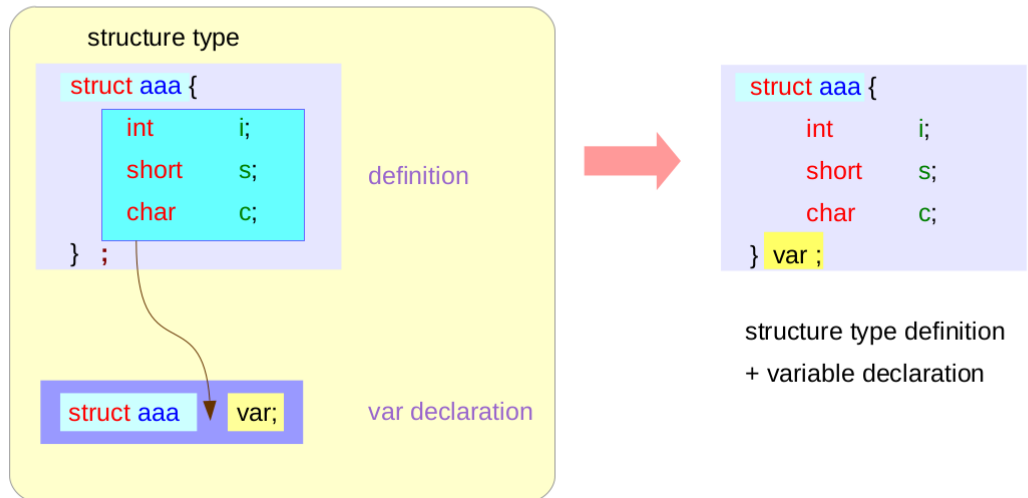
```
struct aaa var;
```

var declaration

structure type

```
struct aaa {  
    int    i;  
    short  s;  
    char   c;  
} var ;
```

## Struct Variable Declaration (2)



## Struct Variable Declaration (3)

structure type

```
struct aaa {  
    int    i;  
    short  s;  
    char   c;  
};
```

```
typedef struct aaa  ATYPE ;
```

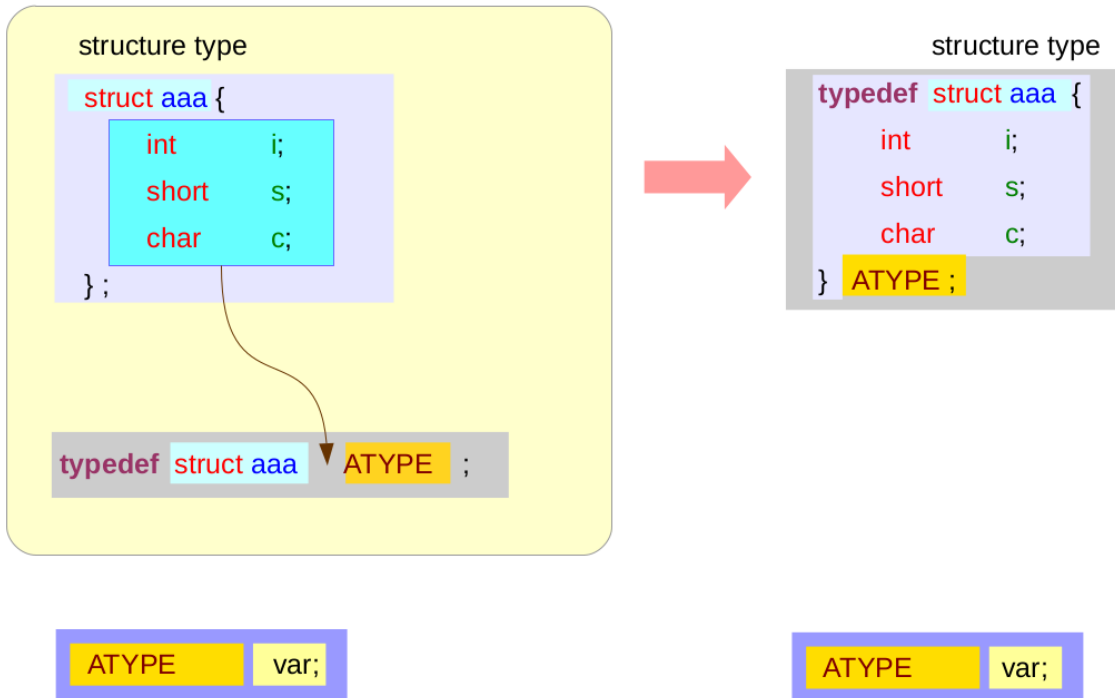
```
ATYPE var;
```

structure type

```
typedef struct aaa {  
    int    i;  
    short  s;  
    char   c;  
} ATYPE ;
```

```
ATYPE var;
```

## Struct Variable Declaration (4)



# Struct Variable Declaration Summary

structure type

```
struct aaa {  
    int    i;  
    short  s;  
    char   c;  
};
```

```
struct aaa var;
```

structure type

```
struct aaa {  
    int    i;  
    short  s;  
    char   c;  
};
```

```
typedef struct aaa ATYPE ;
```

```
ATYPE var;
```

structure type

```
struct aaa {  
    int    i;  
    short  s;  
    char   c;  
} var;
```

structure type

```
typedef struct aaa {  
    int    i;  
    short  s;  
    char   c;  
} ATYPE ;
```

```
ATYPE var;
```

# Structure Variable Declaration

structure type

```
struct aaa {
```

```
    int    i;
```

```
    short  s;
```

```
    char   c;
```

```
};
```

definition

```
struct aaa
```

```
var;
```

var declaration

*accessing a structure variable*

&var

var

&var = &var.i

&var.s

&var.c

var.i

var.s

var.c

*accessing its members*



# Dereferencing Pointers to Structures (1)

$(*p).mem \leftrightarrow p->mem$

