

WELCOME TO CSCUV4

WEEK 4

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# TODAY



15 mins

–

Presentation

10 mins

–

Q&A

35 mins

–

Exercises & checkpoints

## SUMMARY WEEK 2



The Main function



How to compile



First program



Standard I/O, printf & scanf

## SUMMARY WEEK 3



Standard I/O, putchar & getchar



Arrays

# TODAY





## DISCLAIMER

- Here we teach you the syntax and the semantic of C.
- But remember that you need to practice by yourself.

# TYPDEF (1)

- Typedef is a keyword used to assign alternative names to existing **datatypes**.


- 
- A type of variable

- Primary types: int, float, double, char, etc..
- Derived types: arrays, pointers, structures

## TYPEDDEF (2)

- Typedef is a keyword used to assign alternative names to existing datatypes.
- `typedef` `<existing_name>` `<alias_name>`

```
1
2 typedef unsigned long ulong;
3
4 int main() {
5
6     return 0;
7 }
8
```

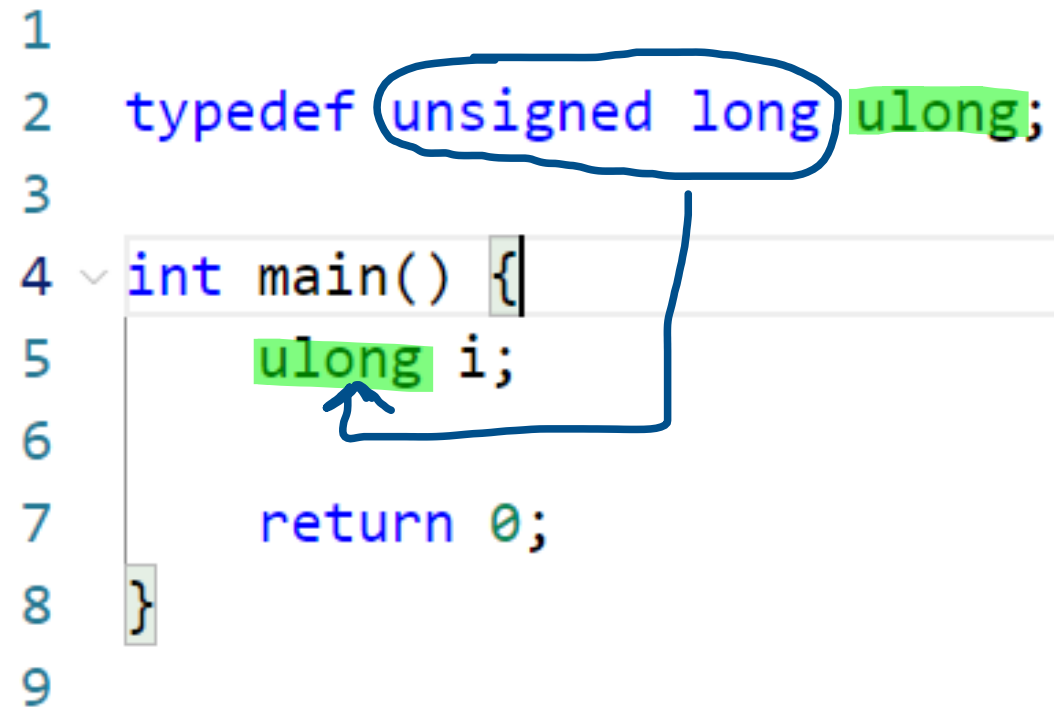


# TYPDEF (3)

What?

Why?

```
1
2 typedef unsigned long ulong;
3
4 int main() {
5     ulong i;
6     return 0;
7 }
8
9
```





# TYPDEF (4)

What?

Why?

```
1
2 typedef unsigned long ulong;
3
4 int main() {
5     ulong i;
6
7     return 0;
8 }
9
```

## TYPEDEF (5)

<sup>1</sup>  
typedef <type> <sup>3</sup>  
                    <alias>

```
1  
2 ✓ typedef struct Books {  
3     char title[50];  
4     char author[50];  
5     char subject[100];  
6     int book_id;  
7 } Book;  
8
```

The diagram illustrates the mapping of the generic typedef syntax to a specific example. A red box highlights the struct definition in the code, and a red arrow points from the '<type>' placeholder in the generic syntax to the 'struct Books' definition in the code. Green numbers 1, 2, and 3 are used to label parts of both the generic syntax and the code example.

## STRUCT (1)

```
1
2 1 struct 2 Books {
3     char title[50];
4     char author[50];
5     char subject[100];
6     int book_id;
7 } 3 book;
8
```

## STRUCT (2)

```
1  #include <stdio.h>
2
3  struct Books {
4      char  title[50];
5      char  author[50];
6      char  subject[100];
7      int   book_id;
8  };
9
10 int main( ) {
11
12     struct Books Book1;
13     struct Books Book2;
14
15     return 0;
16 }
17
```

# STRUCT (3)

```
1  ~ #include <stdio.h>
2  ~ #include <string.h>
3
4  ~ struct Books {
5      char  title[50];
6      char  author[50];
7      char  subject[100];
8      int   book_id;
9  };
10
11 ~ int main( ) {
12
13     struct Books Book1;
14
15     strcpy(Book1.title, "My first book");
16     Book1.book_id = 2324;
17
18     return 0;
19 }
20
```



# CHECKPOINTS

| <u>GROUP 1 A</u> |  | Week 2 | Week 3 | Total |
|------------------|--|--------|--------|-------|
| 2839067/1        |  |        |        | 0     |
| 2816787/1        |  |        | C      | 1     |
| 2817566/1        |  | C      | C      | 2     |
| 2825056/1        |  | C      | L      | 1     |
| 2835267/1        |  | C      | C      | 2     |
| 2823680/1        |  | C      | C      | 2     |
| 2811801/1        |  | C      | C      | 2     |
| 2836012/1        |  | C      | C      | 2     |
| 2810713/1        |  | C      | C      | 2     |

# CHECKPOINTS

| GROUP 1 B |  | Week 2 | Week 3 |   |
|-----------|--|--------|--------|---|
| 2813060/2 |  |        |        | 0 |
| 2710797/1 |  |        | C      | 1 |
| 2928413/2 |  |        |        | 0 |
| 2823106/1 |  | L      |        | 0 |
| 2823735/1 |  | C      |        | 1 |
| 2814919/1 |  | C      | C      | 2 |
| 2839798/2 |  | C      | L      | 1 |
| 2716869/1 |  |        |        | 0 |
| 2944806/1 |  | C      |        | 1 |
|           |  |        |        |   |

# Any Questions?

*Thank you*