Course Information

- Cmpe150.01 Lab+PS: Thursday 3-4-5, BM B4

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Lab Content: https://github.com/zeynepyirmibes/cmpe150-spring20

Student Assistants:

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Course Information

- Quizzes each week (%10)

- Midterm 1 (25%) **March 31**
- Midterm 2 (30%) **May 5**

- Final (35%)

Important Notices

- Teaching Codes accounts will be sent soon.
- First Quiz next week

Last Week

- Introduction to C
- Eclipse & Teaching Codes
- «Hello World»
- printf, scanf

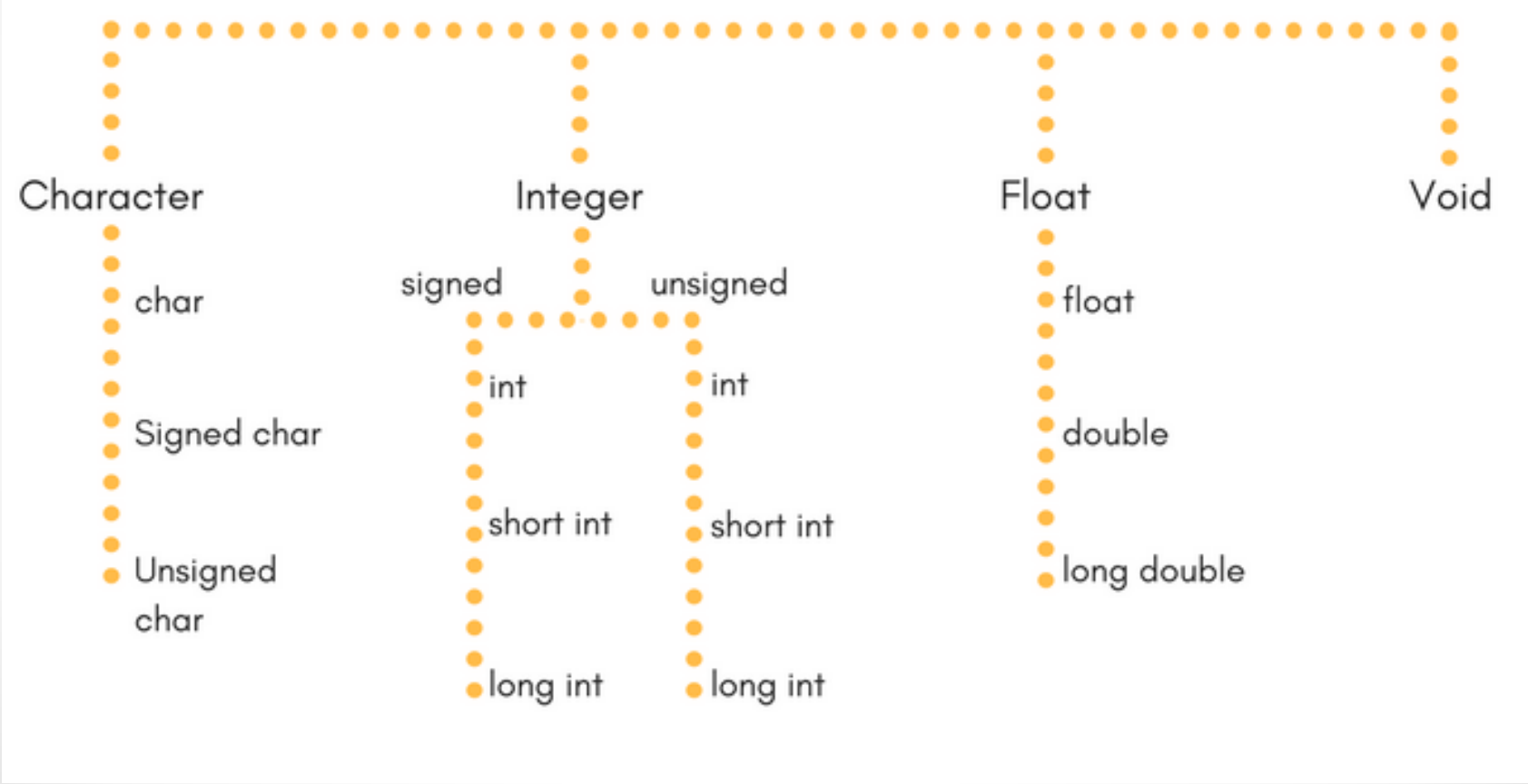
Arithmetic Operators in C

C operation	Arithmetic operator	Algebraic expression	C expression
Addition	+	$f + 7$	`f + 7`
Subtraction	-	$p - c$	`p - c`
Multiplication	*	bm	`b * m`
Division	/	x / y or $\frac{x}{y}$ or $x \div y$	`x / y`
Remainder	%	$r \bmod s$	`r % s`

Fig. 2.9 | Arithmetic operators.

Source: Deitel – C How to Program

C Data Types


Character
Integer
Float
Void
char
Signed char
Unsigned char
signed
unsigned
int
short int
long int
int
short int
long int
float
double
long double

C Data Types

Data Type	Size (bytes)	Example	Range	Format Specifier
char	1	‘a’, ‘b’, ‘\n’	128 to 127	%c
short/int	2	35, 0, -589	-32,768 to 32,767	%i or %d
long	4	980000, -78977765	-2147483648 to 2147483647	%ld
float	4	-5.6, 78.52, 6.0	3.4 e-38 to 3.4 e+38	%f
double	8	9.8888473736467757676	1.7 e-308 to 1.7 e+308	%lf

Format Specifiers

```
int x;
char y;
float z;
double t;
```

Format Specifier	Data Type	Example
%d	Decimal Integer	scanf("%d",&x);
%c	Char	scanf("%c",&y);
%f	Float	scanf("%f",&z);
%lf	Double	scanf("%lf",&t);

Division

Integer division

- The remainder (and floating point) is disregarded.

5 / 2 = 2
10 / 3 = 3

Float division

5.0 / 2 = 2.5
5 / 2.0 = 2.5
5.0 / 2.0 = 2.5

Special Keywords

Keywords			
auto	double	int	struct
break	else	long	switch
case	enum	register	typedef
char	extern	return	union
const	float	short	unsigned
continue	for	signed	void
default	goto	sizeof	volatile
do	if	static	while

Keywords added in C99 standard

`_Bool` `_Complex` `_Imaginary` `inline` `restrict`

Keywords added in C11 draft standard

`_Alignas` `_Alignof` `_Atomic` `_Generic` `_Noreturn` `_Static_assert` `_Thread_local`

Fig. 2.15 | C's keywords.

- Source: Deitel – C How to Program