comp1511 week 2

starting 5 minutes past the hour

Ada Luong

important things to note

- log into **discourse** (the course forum)
- **tutorial code** can be found at
  https://github.com/adaluong/cs1511_21t3/
- **email**: ada.luong@unsw.edu.au
  - if you have a programming question -> search & post on the forum

what's happening today?

- **code demo**: variables/constants, scanf, if statements
- Kahoot! ft. some detours
  - Variables
  - If statements
  - Program Flow
  - C Operators
  - C Quirks

questions?

making decisions
with computers :0

📈 Trending
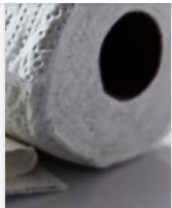
Nobody Can Ace This Random Knowledge Quiz Except For Legitimate Nerds

Ten questions doesn't seem like a lot until you're asked what the safest temperature to consume poultry is.
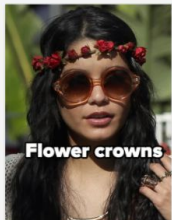
Audrey Engvalson

Let's See How Controversial Your Pasta Opinions Really Are

Pasta lovers only!

xoxobug

Not To Be Dramatic, But We Can Guess Your Exact Age Based On The Fashion Trends You've Tried

Don't lie to me, I know you had side bangs!!!

Flower crowns   Curtain bangs

Lauren Garafano

Which Olivia Rodrigo Song And Color Are You?

Are you getting "Deja Vu" taking this quiz...

beccajayne17

Did You Know We Can Accurately Guess The Shape Of Your Ears Based On Your Taste In Breakfast Foods?

QUIZ

Answer Two Extremely Random Questions And Find Out What Kind Of Pasta You Are

How many pets would you like to have?

What movie would you want to watch right now?
1. **Titanic**
2. **Avengers Endgame**
3. **Shark Tale**

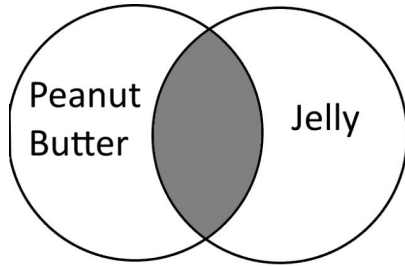**kahoot!** I will pause throughout for questions/explanations

https://play.kahoot.it/v2/?quizId=26ee7fb1-e76a-44d9-9aaf-97824aec9baa

logical operators

pb **&&** jelly
AND
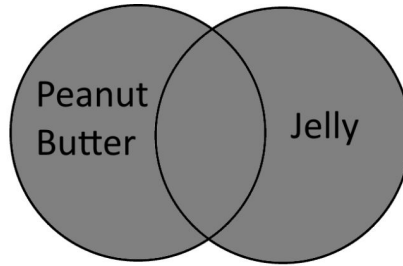
pb **||** jelly
OR
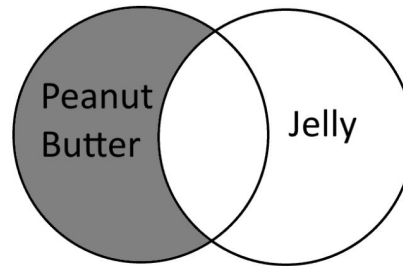
!jelly
NOT

program flow: leap year

C Quirks

- modulo (see modulo_calculator.c)
- integer division (see integer_division.c)
- floating point errors (see floating_point_error.c)

modulo (%)
gives the remainder
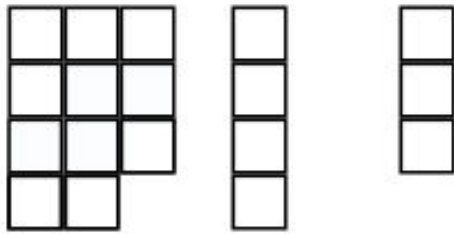
$11 \bmod 4 = 3$

ComputerHope.com

Modulo Calculator by Peter Kerr (Tutor)
https://repl.it/@Divinitus/Modulo-Calculator
(will push a copy onto github)

- 5 % 3
- 1%2
- -1 %2

This is NOT the same as modulo in maths!

C arithmetic examples

$$1 / 2 * 500 = 0$$

$$1 / 2.0 * 500 = 250.0$$

$$(17 / 5) * 5 + (17 \% 5) = 17$$

$$(12 - 17) \% 6 - 4 = -9$$

C arithmetic examples

1 / 2 * 500 = 0 * 500 = 0

1 / 2.0 * 500 = 0.5 * 500 = 250.0

(17 / 5) * 5 + (17 % 5) = 3 * 5 + 2 = 17

(12 - 17) % 6 - 4 = -5 - 4 = -9

[zero (0) interpreted as false, non-zero interpreted as True]

Which of the following conditions is true and valid in C? (Let x = 5 and y = 7)

Next

3 ▲

✓ **1** ◆

0 ●

6 ■
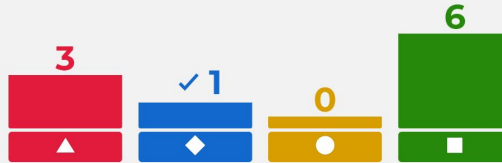
Show media

End game

FALSE
(see logical operators)

▲ x == 5 && (x > 6 || x != 5) ✖

◆ x ✔

TRUE
5 is non-zero

● x % 5 ✖

■ y > x > 3 ✖

FALSE
x % 5 = 0

INVALID
(y > x) && (x > 3)

what is a char?

0	1	1	0	0	0	0	1

|————————————— 1 byte —————————————|

ascii table
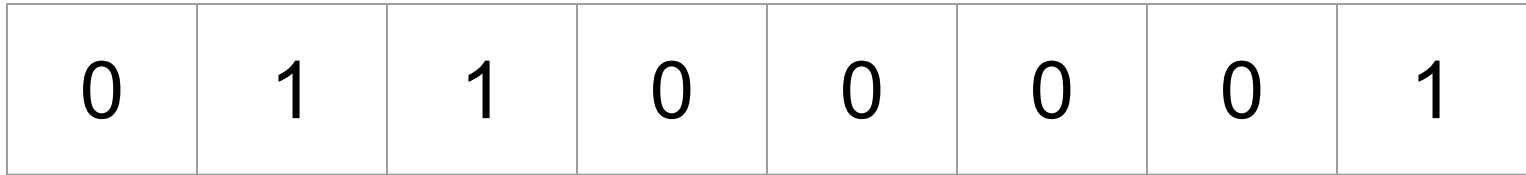
Dec	Char	Dec	Char	Dec	Char	Dec	Char	Dec	Char	Dec	Char	Dec	Char	Dec	Char
0	<NUL>	32	<SPC>	64	@	96	`	128	Ä	160	†	192	¿	224	‡
1	<SOH>	33	!	65	A	97	a	129	Å	161	°	193	¡	225	·
2	<STX>	34	"	66	B	98	b	130	Ç	162	¢	194	¬	226	,
3	<ETX>	35	#	67	C	99	c	131	É	163	£	195	√	227	„
4	<EOT>	36	$	68	D	100	d	132	Ñ	164	§	196	ƒ	228	‰
5	<ENQ>	37	%	69	E	101	e	133	Ö	165	•	197	≈	229	Â
6	<ACK>	38	&	70	F	102	f	134	Ü	166	¶	198	Δ	230	Ê
7	<BEL>	39	'	71	G	103	g	135	á	167	ß	199	«	231	Á
8	<BS>	40	(	72	H	104	h	136	à	168	®	200	»	232	Ë
9	<TAB>	41	)	73	I	105	i	137	â	169	©	201	…	233	È
10	<LF>	42	*	74	J	106	j	138	ä	170	™	202		234	Í
11	<VT>	43	+	75	K	107	k	139	ã	171	´	203	Å	235	Î
12	<FF>	44	,	76	L	108	l	140	å	172	¨	204	Ã	236	Ï
13	<CR>	45	-	77	M	109	m	141	ç	173	≠	205	Õ	237	Ì
14	<SO>	46	.	78	N	110	n	142	é	174	Æ	206	Œ	238	Ó
15	<SI>	47	/	79	O	111	o	143	è	175	Ø	207	œ	239	Ô
16	<DLE>	48	0	80	P	112	p	144	ê	176	∞	208	–	240	
17	<DC1>	49	1	81	Q	113	q	145	ë	177	±	209	—	241	Ò
18	<DC2>	50	2	82	R	114	r	146	í	178	≤	210	"	242	Ú
19	<DC3>	51	3	83	S	115	s	147	ì	179	≥	211	"	243	Û
20	<DC4>	52	4	84	T	116	t	148	î	180	¥	212	'	244	Ù
21	<NAK>	53	5	85	U	117	u	149	ï	181	µ	213	'	245	ı
22	<SYN>	54	6	86	V	118	v	150	ñ	182	∂	214	÷	246	^
23	<ETB>	55	7	87	W	119	w	151	ó	183	Σ	215	◊	247	~
24	<CAN>	56	8	88	X	120	x	152	ò	184	∏	216	ÿ	248	¯
25	<EM>	57	9	89	Y	121	y	153	ô	185	π	217	Ÿ	249	˘
26	<SUB>	58	:	90	Z	122	z	154	ö	186	∫	218	/	250	˙
27	<ESC>	59	;	91	[	123	{	155	õ	187	ª	219	€	251	˚
28	<FS>	60	<	92	\	124			156	ú	188	º	220	‹	252	¸
29	<GS>	61	=	93	]	125	}	157	ù	189	Ω	221	›	253	˝
30	<RS>	62	>	94	^	126	~	158	û	190	æ	222	ﬁ	254	˛
31	<US>	63	?	95	_	127	<DEL>	159	ü	191	ø	223	ﬂ	255	ˇ