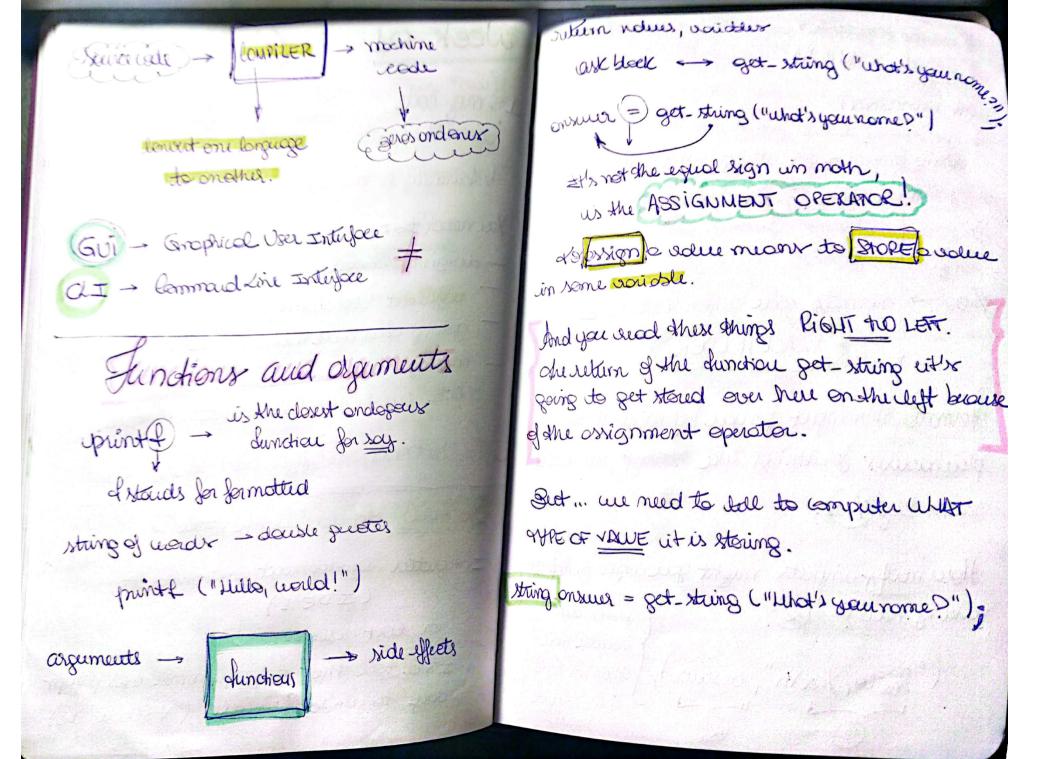
Week 01 C - Fraditional
Is my code language of
Garding to our specifications on the like.
. You need to:  - duign good leade;
reflicient algorithms.
- moling rure your code Looks metty,
ued discusse of a mother of style.
Correctness, Derign and Style ~
So how do you write code?  Integrated Development Environments
(REA) Or text editors U
Exited that a programmer uses pulops every day to write sheir code. (VS code ute)



Vindude Kessa & Mindude < stdio. h> und mainlisaid) string answer = get-string ("what's your name?") ymind ( 11 hello, 1.3 m", onewa); % is - formate reade which xwee os a PLACEHOLDER atomats, it's input for you by using these placeholders for things like strings, represented again by 1. sx. How many inputs might you winfer prints is 7 fruits cau graving now? (2) I houdle more ("hello, 1/2 h", onsuer); Shon one Type of voidle or

The functions we've been toking Last de take imputs, otherwise now known as arguments, or porometers, much syronymour. that's just the long word for on imput to a function. And some functions have either side effects something on the serien, soit of isually or

dividua sour - printing something saying audibly - on they return a value, which is a rewable value, like nome or onsurer, in this cox.

arguments -> dunctions -> return

When we god get to Python and other langua ger dater in the term, there's actually warier mays to do this.

When Solicked +> (biec) min triu

·/ -> this directory (here) Jupes bool, chae, double, floot, int, long, string Ete, 1.4, 1. i. 1. di, 1. ds) Variables and Syntollic Sugar unt countre = 0 reaunter = recurried +1 <> Counter++. this is rotequality! Overflow

Mindude Mindude unt main(usid) // Prompt wer forx longx = get-long("x:"): I knompt was for y dongy = get\_long ("y: "); 11 Perform addition print ("(.li)", x+y);

## Comolitions

Cues a single equals right for assignment from sight to left, munor difference between the

LEFT RIGHT

Constant in a programming buguage is just on additional hint to the competer short restentially under you to program more defension where defension deserves and the second deserves deserves and the second deserves deserv

If you don't must yourself newsonily to the seem up loter, or honesting, in procetice, if you know what number should never change, more it contact and never whink about it again. We

you loter in your code convot schonge the number

and conther convention in C and other longuage, when you have a constant, it's often common to just copyclize the variable.

example: Kird of like you're yelling, but it count wint MINE = 2; really just

visually makes it stoud out. So it's know of like a nice scale of thems that helps you realist, that must be a constant.) du word const does. But the copidization is just a visual cuminder that this is remaining somehawa constant.

Kind of humistics = Strategies/readily

fells me it a number the human types is even or odd D"

we can use a knomemonic for that in place

flant, using syntax unive seen, might I

determine it n is GUEN or ODDD

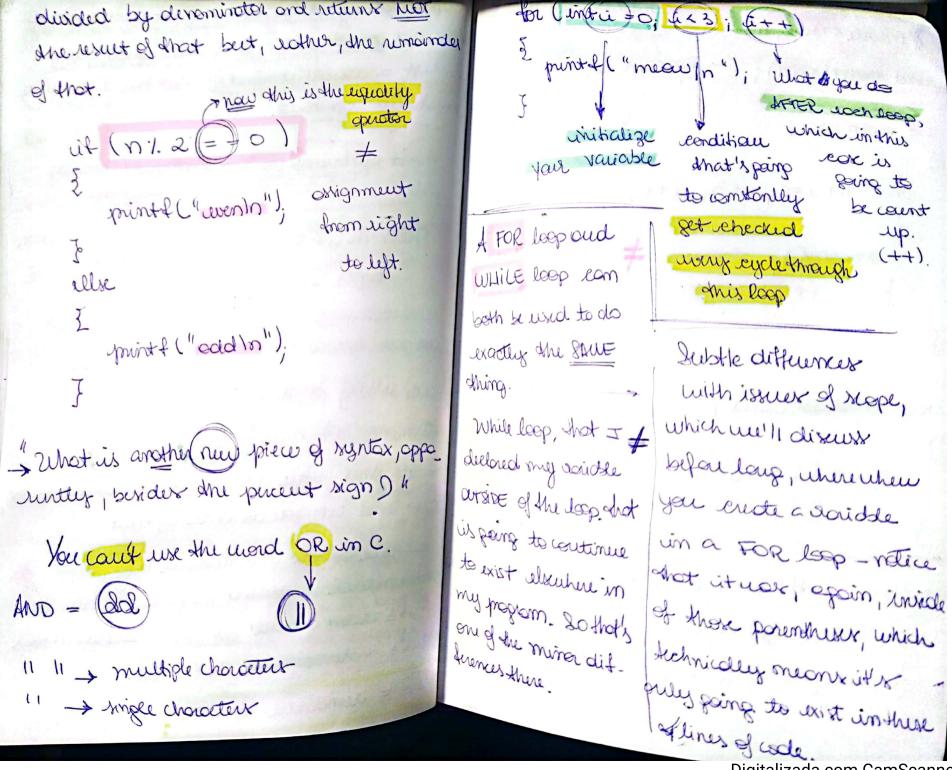
show's this little operator, the remainder operator

that will let you do exactly that.

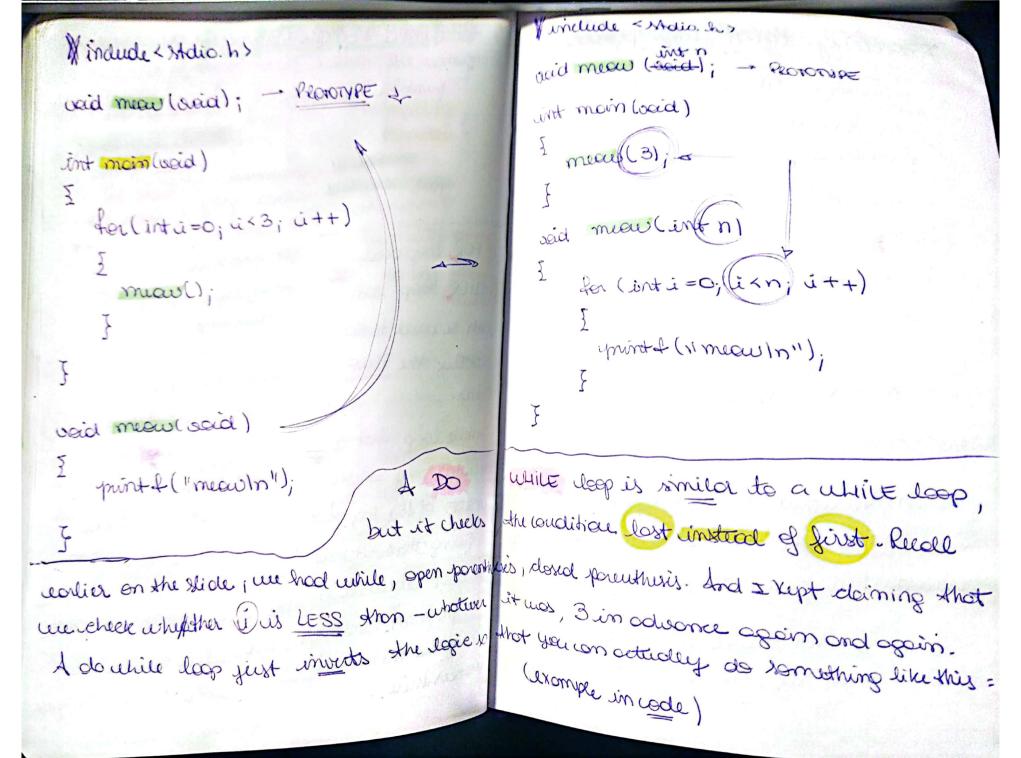
If you divide only number by 2, about mothernotical heuristic is going to tell you it it's even or odd based on whatever whether thuis a rumainder of o as I.

/ = remainder sperator

2 It does



Digitalizada com CamScanner



## Floating Point Imprecision

Expression We can explicitly tall the computer that are cetally mont to decot shis into a shough with a flooting-point value. I can convert of to a floot by doing this, I can convert of the a floot by while white the type floot inside of porentheses sight before the type floot inside of porentheses sight before the

Sect it's impricise ...

So in the world of integer, it you're only using three bits, those three bits wentedly overflow when you count post &.

Secouse what should be 8 court fit, so to speak, so it rolls back our to 0.

## Integer Overflow

Suppose athor we have three bets.

## 000

and we counted from 0 to \$10,1,2,3,
4,5,6,7. How would recount to 8)

Someone proposed, we need

1 1 1 1 a fauth bit. If you have

a 4 fort, it you have occess to mother "light bulb "on transister.

It you don't, though, the next numbers often this is technically 2000.

But if you don't have space for on hord were for that fourth sit, you might or were just be representing the number o. I im the world of integers; it you've only wing 3 bits, shows 3 bits wentially overfear when you examt post 8.

Beaux what should be 8 court 417, so us speak, so it sally book and to 0.

And os oreone or this problem might seem, and humans have done this a leaple of times. You might readle knowing obout or reading obsert the Y2K problem, where a lot of people thought the world was ging to send.

Secouse on Jonesony 1xt of 2000, a lot of compatery, meximosley, were going to update their clocks from 1999 to the year 2000.

The problem is, though, for decoder, for efficiency, we howevery use howevery were honestry in the hotest of not thing years as 4 digits. Because that I just a lot of space to water, expecially rince centuries don't hoppen that often.

sold of computer systems up a dig sold on when bondurare was very expensive and menous was very dight, just stand the lost 2 digits of oney year.

whe produm on forwary 1st of 2000 is that 99 rolly over to 100. But if you don't have been for onother digit it's just 00. And if you code oswarer a profix of 19, well, we just went from she year 1900 back to the year 1900. Anonkfully, a lot of people what a lot of code.

Hardwore is so much cheoper there days, computers are so much forthe, it's not as sig of a deal as it might have been decades ago. But that's undeed the solution.