Day 10 27/8/25 —— wednesday.

⇒ How to master coding

All of these are important to master coding:

1. Learn the Basics.
2. practice every day, incrementally work on harder problems.

   = easy to harder problem
3. Debug
4. Run, make planned mistakes, compile and debug

   = make a mistakes by your own
   and check the error what it gives
5. Do mini fun projects

   "Fall in love with coding"
6. Learn from others / Github.

   = how others write the code
7. Logic building.

Qs. Find total expenses for a month.

PG = 5000	Food = 4000	Travel = 2000	others = 4000

⇒

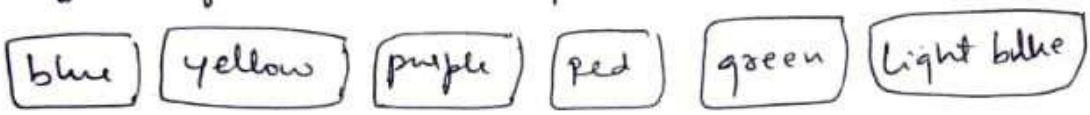
```
int pg = 5000
int food = 4000
int Travel = 2000
int others = 4000
int total = 0
total = pg + food + travel + others
```

Print (total)

Program :

```
Public class Expenses {
  Public static void main (String[] args) {
        int Pg = 5000;
        int food = 4000;
        int Travel = 2000;
        int others = 4000;
        int Total = 0;
        Total = Pg + food + Travel + others;
        System.out.println("your total expenses : "+total);
    }
}
```

Qs : find if there is a green color block ?



⇒ find if (search) ⇒ Notice / read
⇒ one item at a time
⇒ compare = = green
⇒ if yes = success, found
⇒ else, go to next.

⇒ → for / while

Iterate over colors list / Arrays

i/state → check if item (is green element)

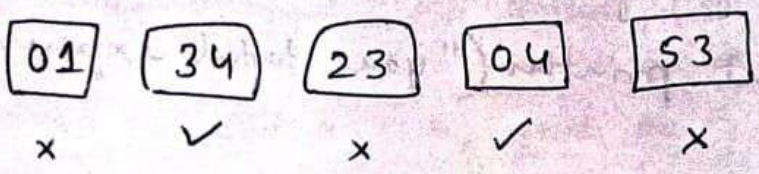
→ otherwise
continue to next element.

Algorithm
↓
* series of steps to solve the problem.

⇒ Pseudocode (fake code)

```
for ( i=0 ; i< blocks-1 ; i++)
    if ( blocks[i] = = green)
        print ("found");   or else continue
```

Qs: Count of even numbers in the list?



Count = 1 + 1

Count = 2

even = exactly divisible by 2 and gives remainder 0

Algorithm

⇒ Iterate over the elements

↳ check if even

if yes count ++

else

continue

Pseudo code

```
int, Count = 0
int array = [22, 4, 6, 8, 10]
for ( i=0 ; i<5 ; i++)
    if (array[i] %2 == 0)
        count++.

return count;
```

Qs: Sort these in ascending order?

01	34	23	04	53

small → big

⇒ Iterate over one element at a time

↳ compare with all other elements

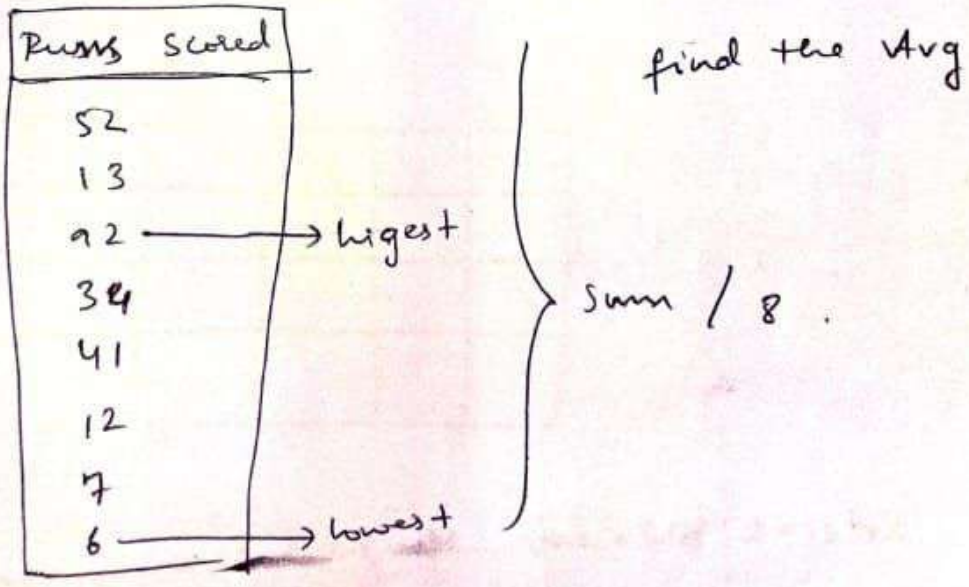
if next element is smaller

↳ then swap.

bubble sort.

Eg: Rohit Sharma's score in T20 world cup in 2024.

Qs Avg of Runs ~~Scored~~ Scored.



(1). find the highest

(2) find the lowest

(3) find the Average.

→ highest = ~~52~~ ~~52~~ (92)

→ lowest = ~~52~~ ~~13~~ ~~12~~ ~~7~~ (6)

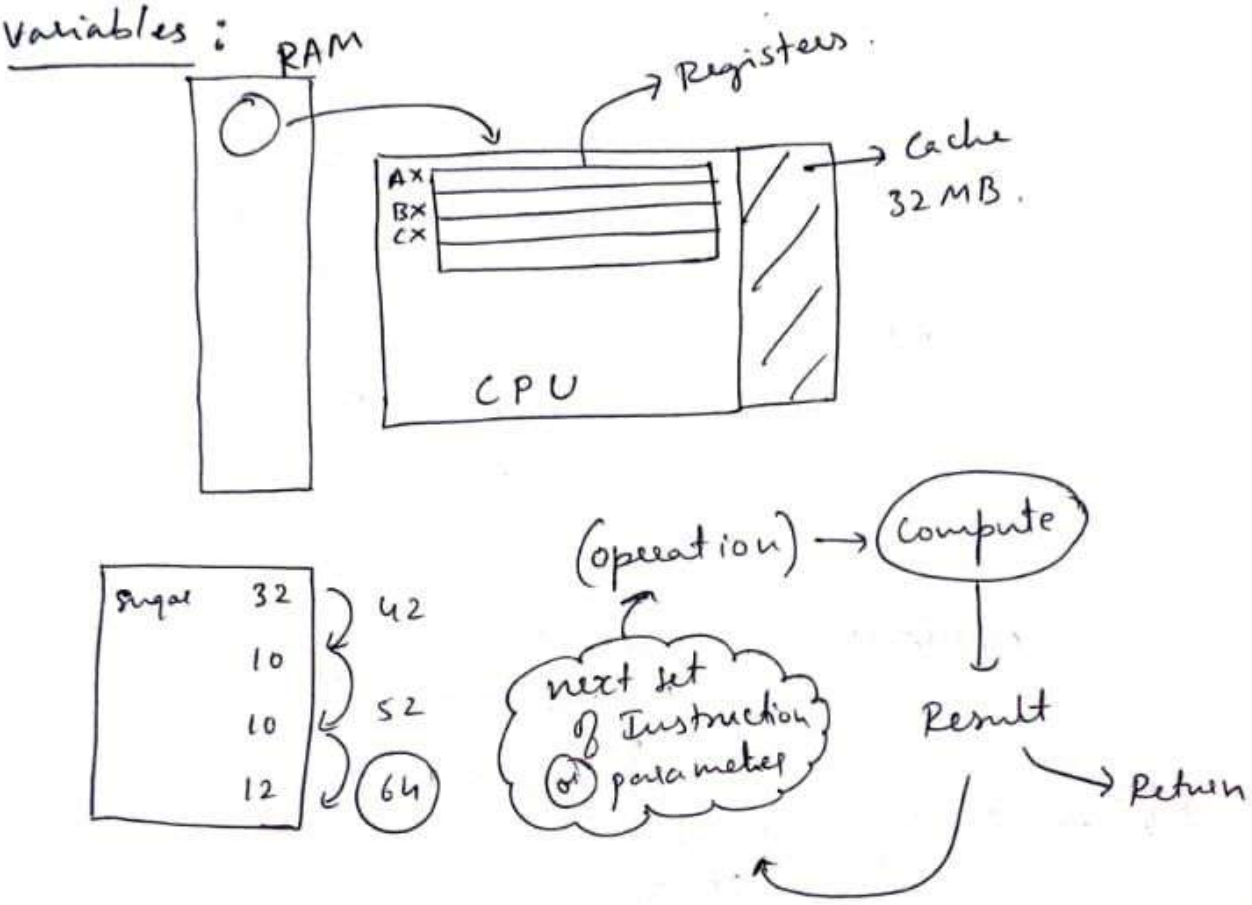
→ sum = 52 + 13 + 92 + 34 + 41 + 12 + 7 + 6

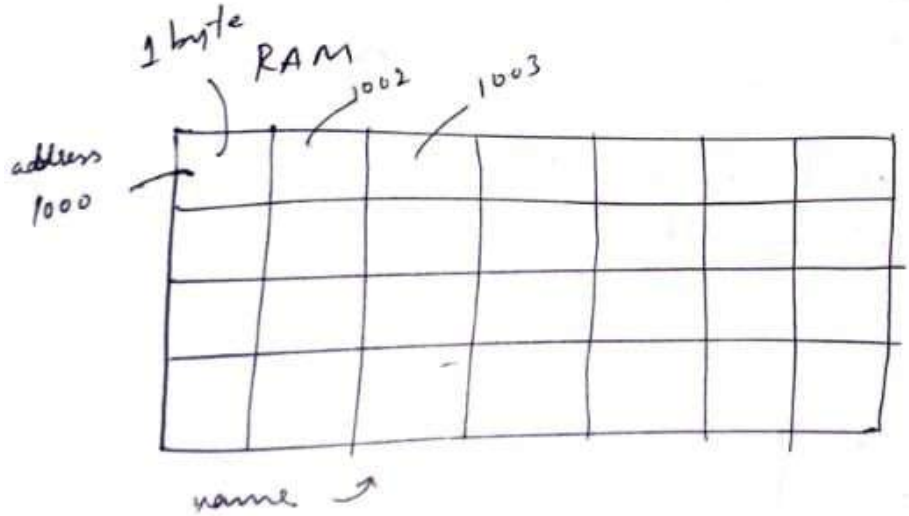
sum = sum + array[i]

Avg = sum / 8.

⇒ Variables and Data types. PART-1

Variables :





To make programmer easy the variable existed.

* instead of remembering the address manually

(1) Simplicity → Readable

(2) Flexibility → dynamic memory Allocation

int for while if else } keyword

std library functions.

we should not use keywords as variable

X

i, j, K, temp, a

aa, m in

→ don't use these variable

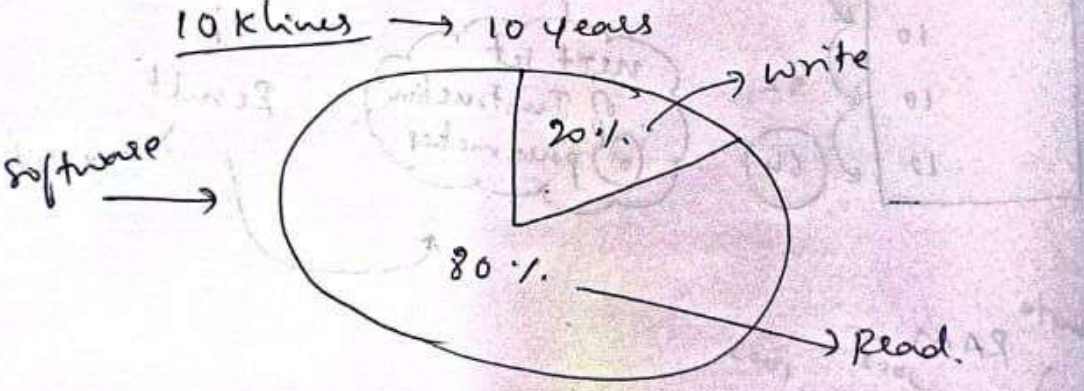
write a code (using) readable (or) understandable variables

~~aag~~ age = 10

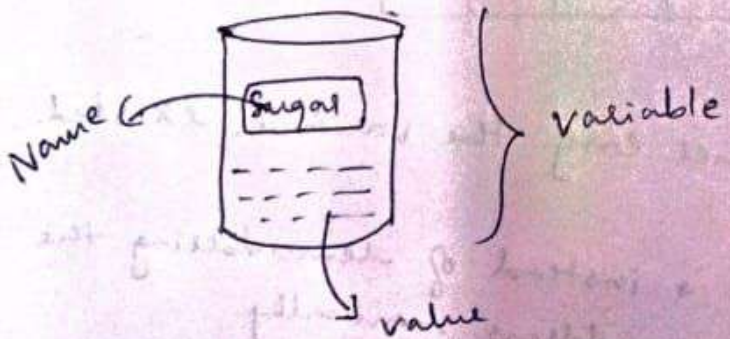
Name = "Anamya"

height = 5.9. ✓

10 klines → 10 years



* Compilee will work if in case you give i j k (or) age, height variable name.



⇒ Variables and data types - Part 2

* Why we have datatypes ?

Age → 0 to 120

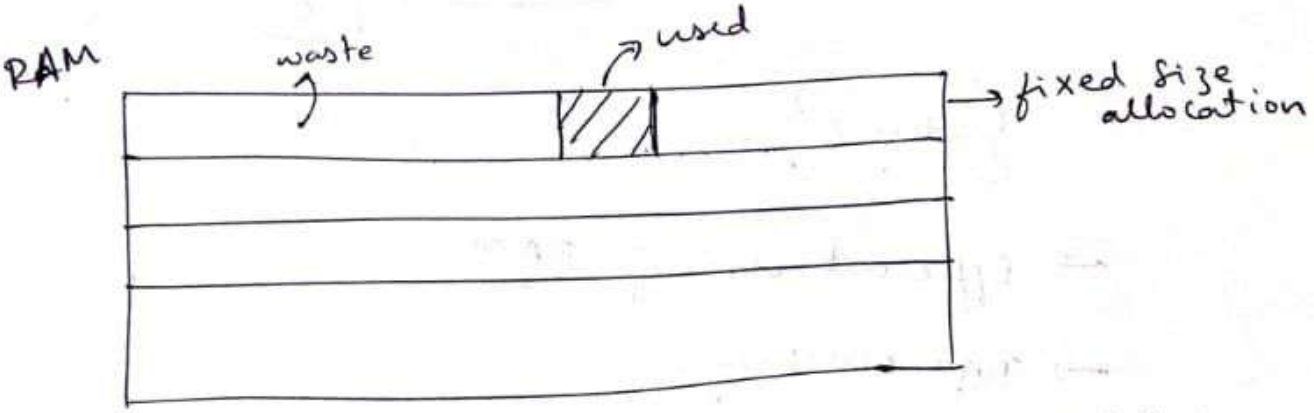
Student standard → 1 to 12

height →

Salary →

name →

} how much space we are allocating in memory?



* when you not having the concept of datatypes means.

Eg: name → you should randomly set 10 bytes memory. for it.

* if in case the name will satisfy 5 bytes means the next 5 bytes will be get wasted.

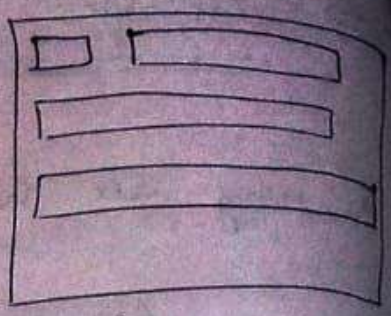
Same size that fits to everybody

→ This is not done in the memory.

different Data

different memory is needed

boolean	1 bit
int	4 byte
float	4 byte
double	8 byte



Data + Type

Data → information

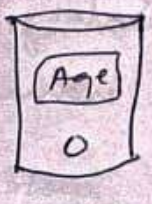
Type → which type of info

```
int age = 0;
```

int → data type

age → variable

0 → value

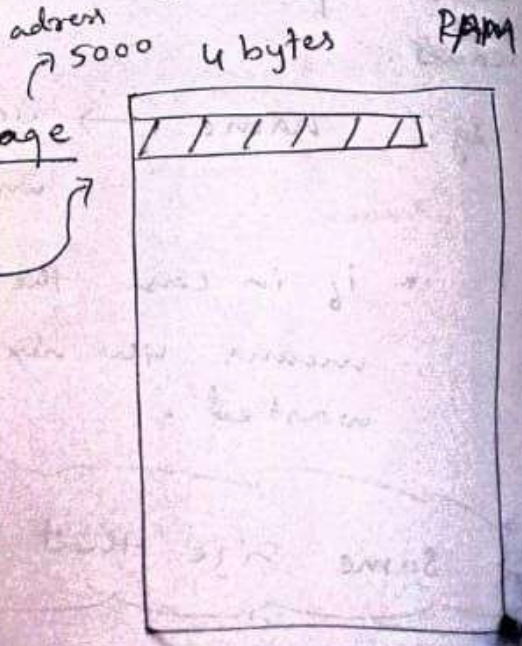


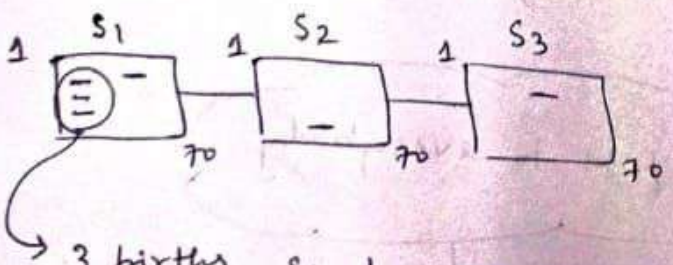
why ?

→ Efficient use of RAM

→ Type checking.

→ Type casting. eg: String → Int



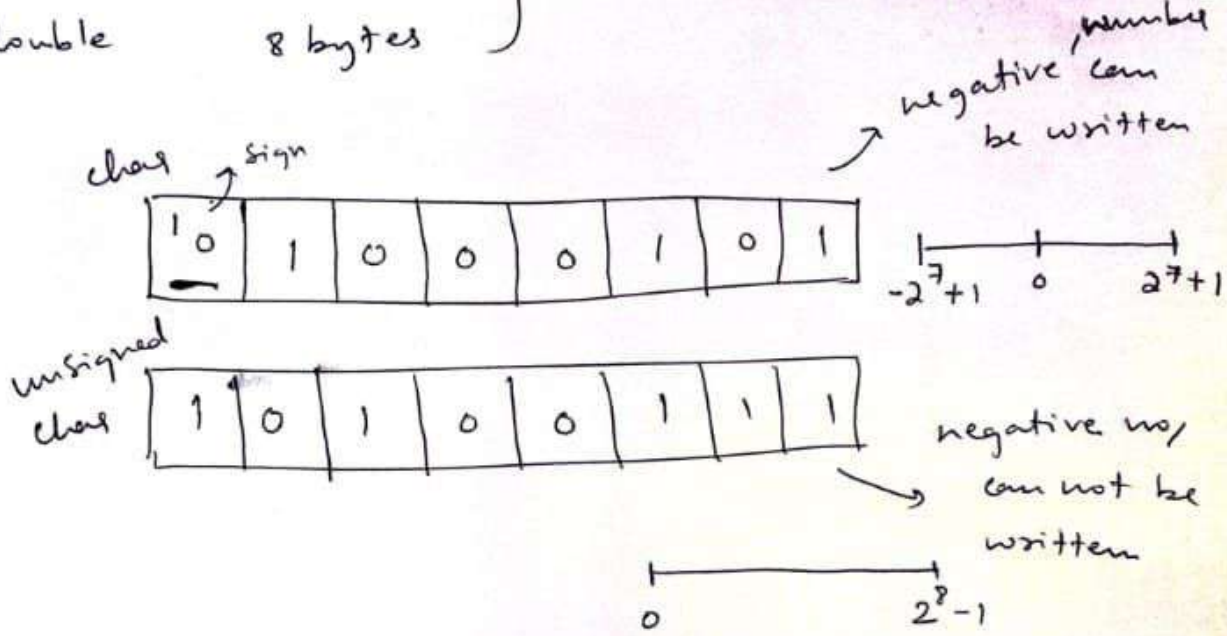


3 births

S1 1
S1 2
S1 3

Insufficient memory.

boolean	1 bit	in java
char	2 bytes	
byte	1 byte	
short	2 bytes	
int	4 bytes	
long	8 bytes	
float	4 bytes	
double	8 bytes	



Program for different datatypes