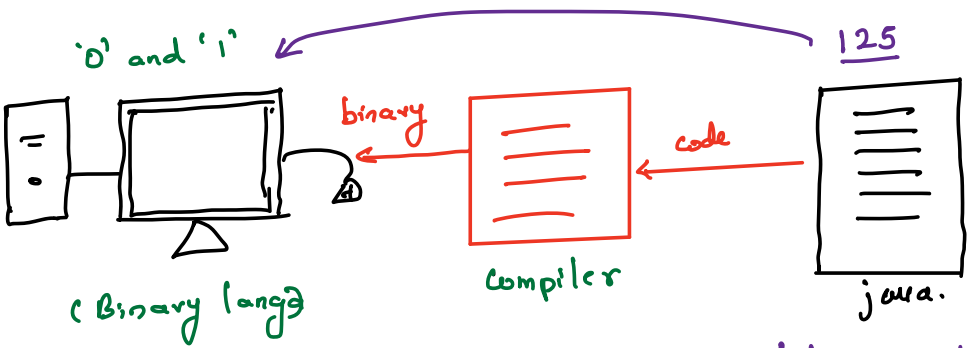
Datatypes

int, long, float, double, boolean, char

char : 'a' - 'z'
'A' - 'Z'
'0' - '9'
@, -, -, -1 ; etc

```
int num = 10;
char ch = 'a';
sop(ch) → a
```

' ' → in java
single quotes



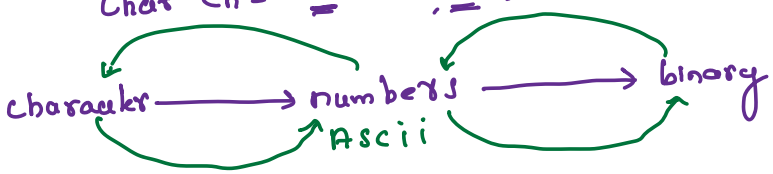

```
int num = 125;
```

numbers → binary system.

'A'
65
0110 0101

1 → 0001
2 → 0010

Char ch = 'A' → 65, 66, ...



Ameaic stand code for information interchange
every char has a numeric value associated with it.

'a' → 97	'A' → 65	'0' → 48
'b' → 98	'B' → 66	'1' → 49
'c' → 99	'C' → 67	'2' → 50
⋮	⋮	⋮
'z' → 122	'Z' → 90	'9' → 57
		'10' → 58

"10" 'A'

"1" 'AB'

"jay" string

String : Group of characters

Part of syntax

keyword ← String str = "Hello"; → user defined

Predefined

S should be upper-case

Used defined variable

"1" → string

sop(str.length());→ 5

H	e	l	l	o
0	1	2	3	4

' ' → char

" " → string

// get char at 'i' place

sop(str.charAt(4)); → '0' or "0" ✗ ✓

charAt → char and 'i' index

o/p → '0' → o/p 0

char

Quiz

0 1 2

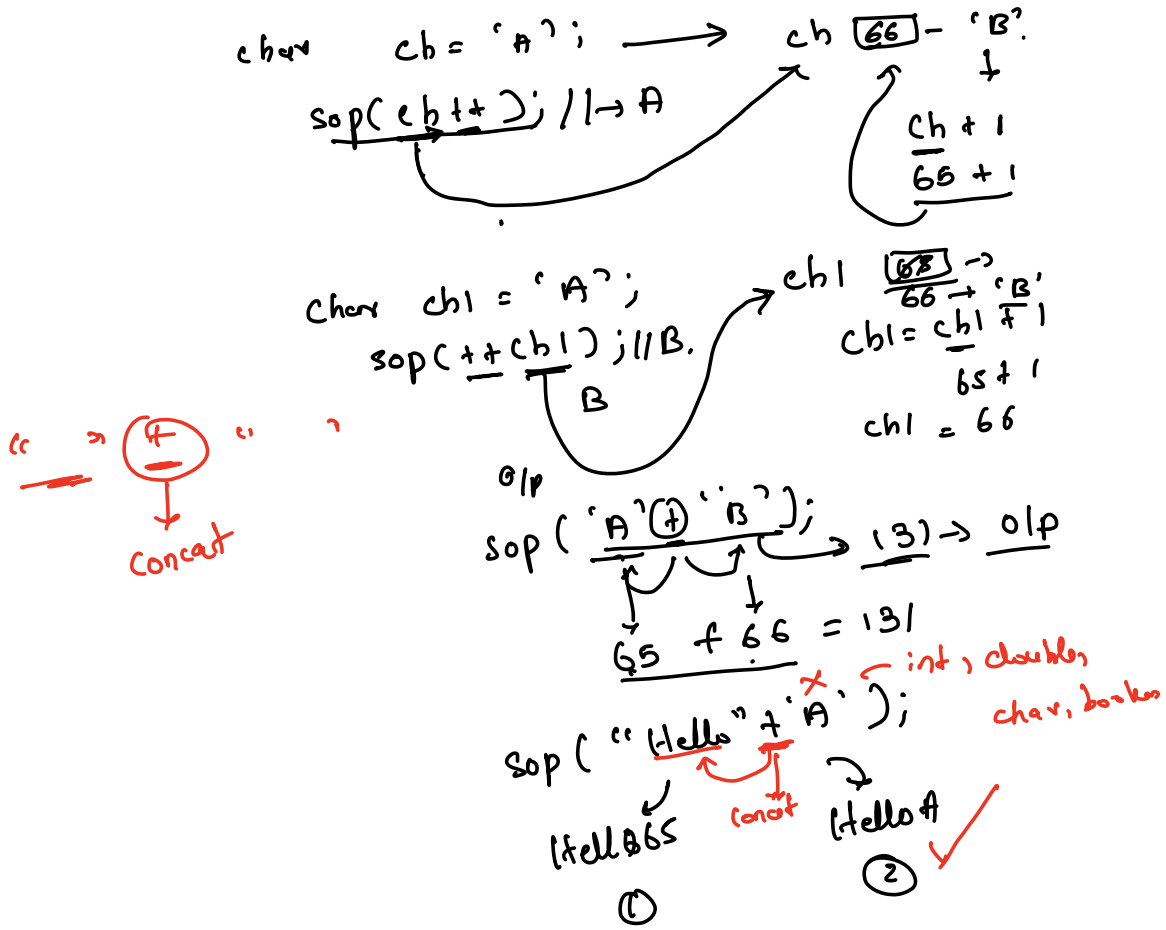
Hey there

'y' → small

str.length. x → error

"Hey there" → 9

0 1 2 3 4 5 6 7 8



→ Inverse Array →

A = [2, 0, 1]
0 1 2

o/p [1, 2, 0]
0 1 2

1, 0
↓
0, 1
↓
1, 0

1) Created a new Array B.

2) B[i] = A[A[i]] ✗

B[i] = A[A[i]]

A = 2, 0, 1
0, 1, 2

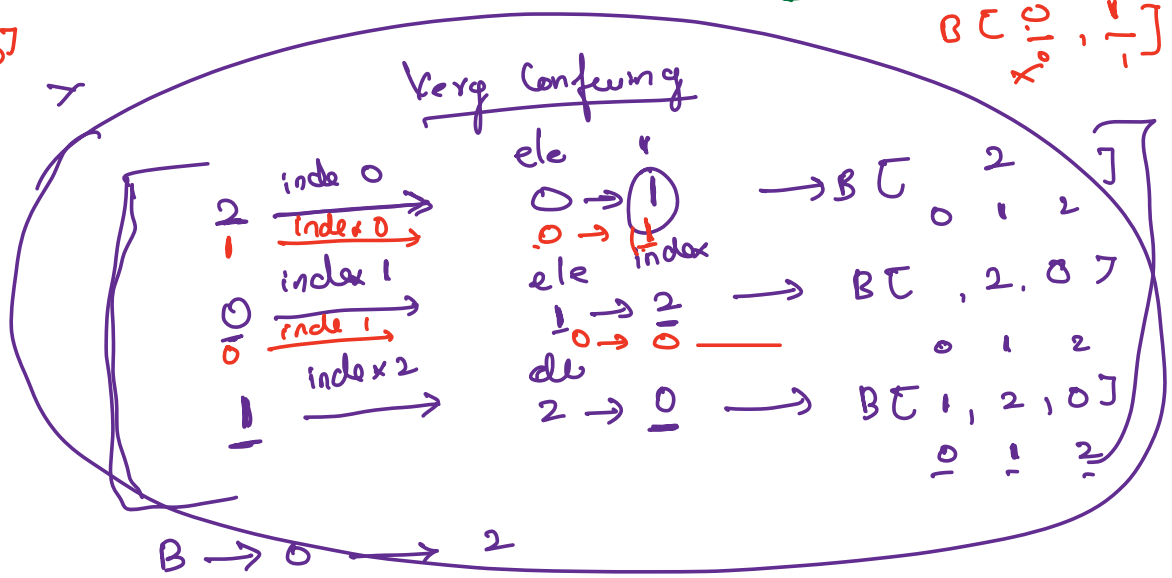
Since 2 is at index 0

2 1 4
0 1 2

3 1 0 2 →
0 1 2 3

B[0, 1]
x0 x1

[1, 0]
0 1



for (0 ——— 2)

i → the index will become → 0 1 2
element

element will become 2 1 0
index → B

```
for(int i=0; i<A.length; i++){
    int val = A[i];
    B[val] = i;
}
```

val is becoming index → index becoming value

B.set(val, i); ArrayList

A = [1, 0] ⟶ B [1 0]
0, 1 0, 1

index & val

i	val = A[i]	B[val] = i	i++
0	1	B[1] = 0	1
1	0	B[0] = 1	

[1, 0]
0 1

Q → Given an string. write a function that returns total no of uppercase chars. in the string.

string	count
hello	0
Hello	2
CoDiNG	4

'a' - 'z' → 97-122
'A' - 'Z' → 65 - 90
'0' - '9' → 48-57

1) → HellO → iterate str
2) → check if
val = str.charAt(i)
if (val >= 65 && val <= 90)
3) count ++

Q → Given string → return reverse

MadaM → MadaM

hello → olleh

pen → nep.

str.length = 5

str.length()-1 = 5-1

He l l o

0 1 2 3 4

↳ reverse

4 3 2 1 0

o e l l H

1) take a new string rev = ""; empty string

2) reverse loop str.length()-1 → 0

4 → 0

3) rev += str.charAt(i);

4) return rev;

Pocket

A = [1, 2, 5, !, 5, !]

of → [3, 1, 2, 3, 2, 3]

for(

hello

count = 0;

sum = 0;

prod = 1;

" "

olleh → ✗

solleh → ✗

static ArrayList returnArm (int A) {

(153)

$= 1^3 + 5^3 + 3^3$

$= 1 + 125 + 27$

$= 153$

}

A

2 5 3]

for (1 ———

ArrayList [Integer] ar = new ArrayList <>();

int num = i

if (isAmstrong (num))

{

sop(——— ,

is

}

}

return ar;

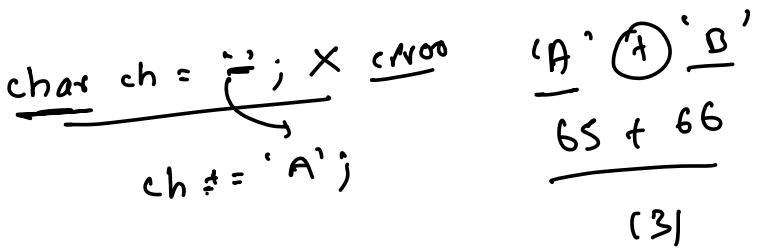
1, 2 <3

Arrayt

{0, 1, 2} (x) ✓

.set (3, 5)

add (3, 5)



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