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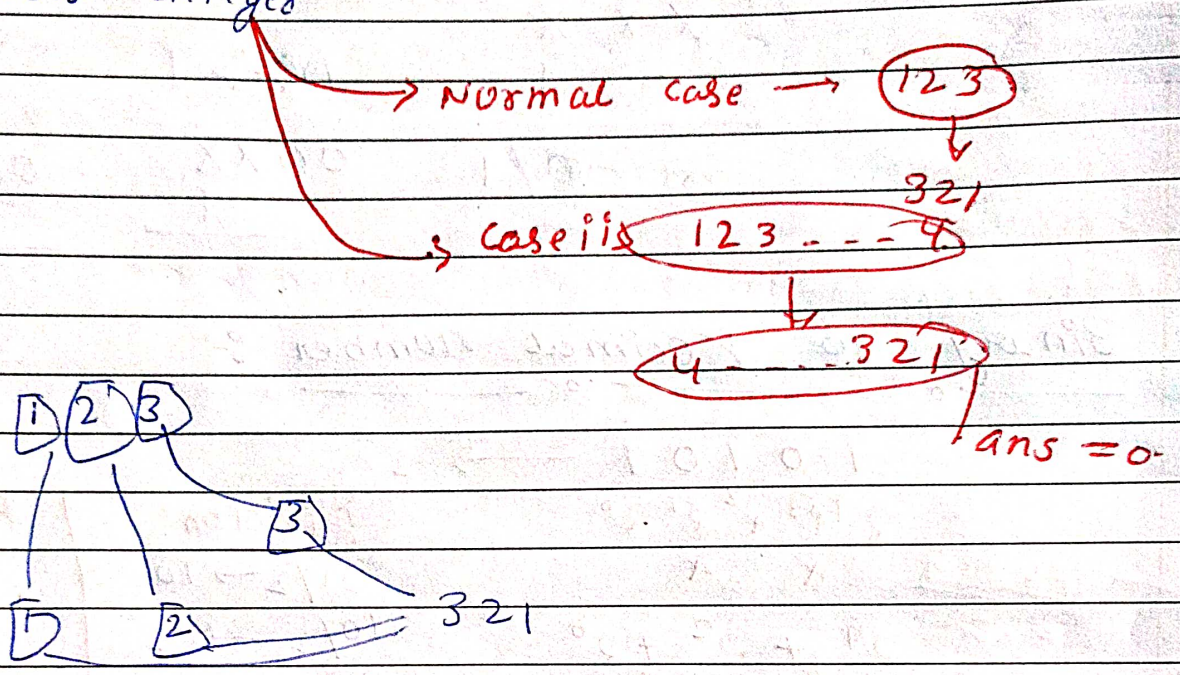
-:Lacture-07:-

:Questions:-

9- Reverse Integer



num = 123

%10 = 123%10 = 3

ans = 0

En:- I/P = 123
O/P = 321

I/P = -123
O/P = -321

I/P = -2147965482 1
O/P = 0
(Because Reversed no. is exceed the range of int).

formul [ans = ans x 10 + diget]

num = 123

diget = 123 % 10 => 3, similarly 2, 1

ans =	0, 3,	32	321
n =	123/10 = 12	1	0 — stop.

```
while ( n != 0)
  { int diget = n % 10;
    int ans = (ans x 10) + diget
    n = n /10
```

INT_MIN, INT_MAX

→ ans = $[-2^{31}, 2^{31}-1]$

let = $2^{31}-10$.

ans = ans x 10 → greater go outside from integer range.

```
if (ans > INT_MAX / 10) {
```

ANS x 10 = INT_MAX / 10 x 10

ans x 10 = INT_MAX — return 0

= Compliment of Base 10 :- — Binary to decimal → Decimal to b°

n = 5 → 101.

complimen → 010 — 2.

n = 7 → 111

onescom → 000 — 0

num = 10 —— 1010

↓

0101 ——— 5

n = 5 — 101

↳ 000 ---- 00101

~n = 111111 ---- 000[10]

into rgr

& —
~ —
| —
>> —
<< —

~n & mask ⟶ answer

mask = n = 5 — 000 ---- 000111

= Power of 2^n :-

n = 16/2 ⟶ 8/2 ⟶ 4/2 ⟶ 2/2 ⟶ 1.

14/2 ⟶ 7/2 ⟶ 3/2 ⟶ 1.

Inter ⟶ $[2^{-31} - 2^{31}-1]$

$2^{31} \rightarrow 2^{10} \cdot 2^{10} \cdot 2^{11}$