Compaction → Shuffling required
Linking mechanism → Shuffling not required.

Lecture-21
BDU

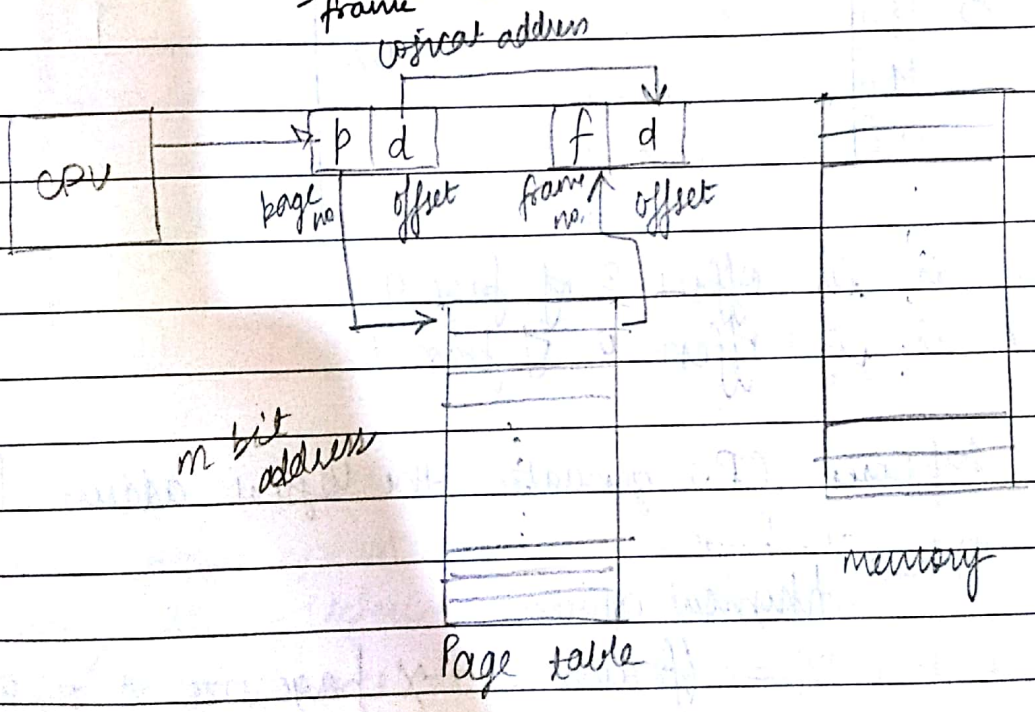
20/03/18

Overlays - Frequently used instructions are in the primary memory but the rest are kept in secondary storage. And when needed they are swapped into memory.

Paging

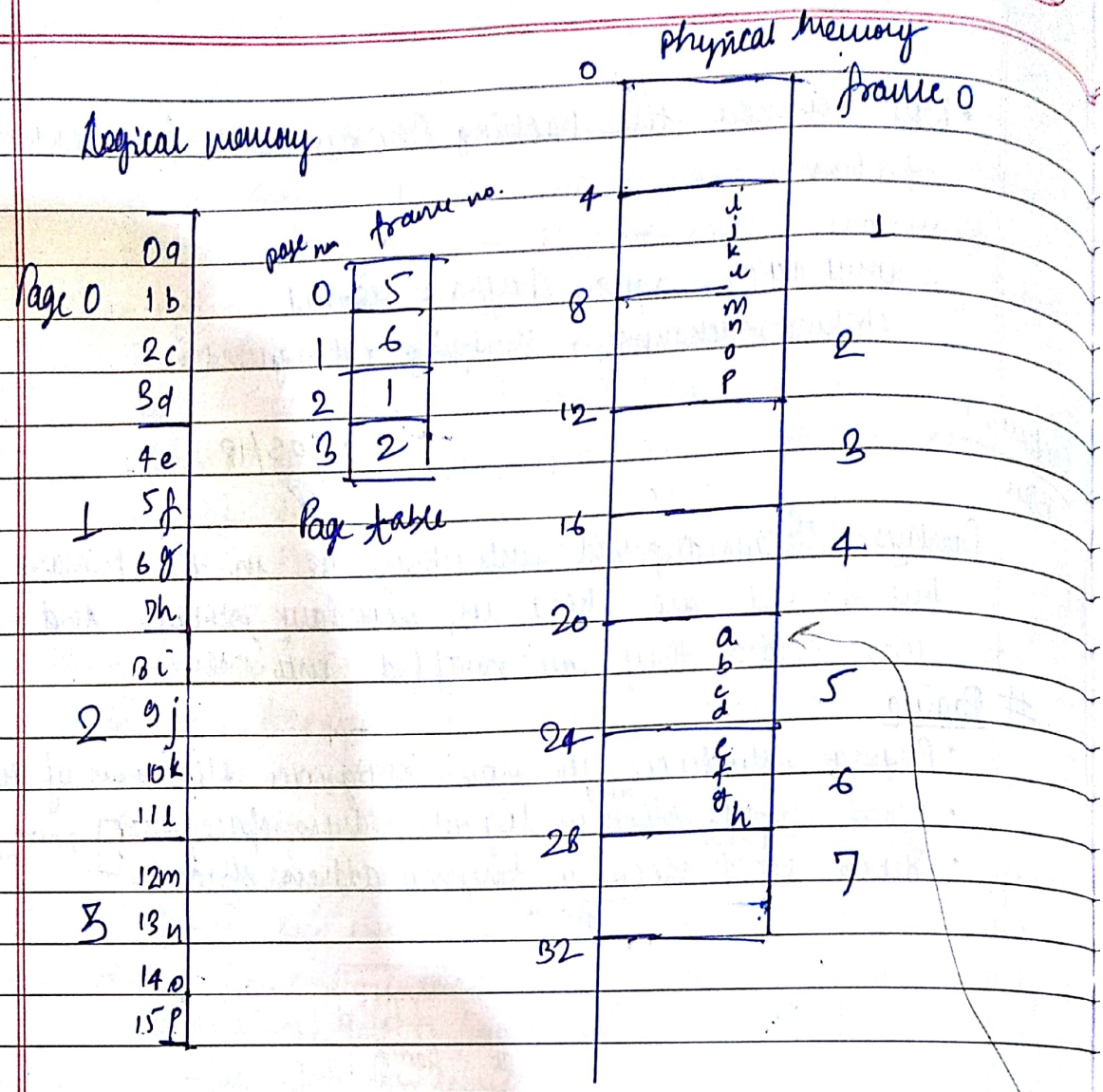
- Paging introduces the non-contiguous allocation of resources.
- Fixed sized block (→ page) in logical address space
- Fixed sized (same) block in physical address space → frame

] same block size



m-n	n

n. no. of bits for offset
size of page table = 2^n
(m-n) bits used for each page no.
If m = 6, page size = 4
∴ offset = n = (m-n) = 6 - 4 = 2
∴ m - n = 6 - 2 = 4
∴ 2^4 no. of pages



a is in offset 0 of page 0
e is in offset 0 of page 1

Suppose CPU generates the logical address 00 00

Then physical address
= (frame no. × page size) + offset
= 5 × 4 + 0 = 20

Logical address was 13
= 1101

In page table
[3] = 2
= 2 × 4 + 01 = 9

Paging suffers from internal fragmentation in fixed size blocking.