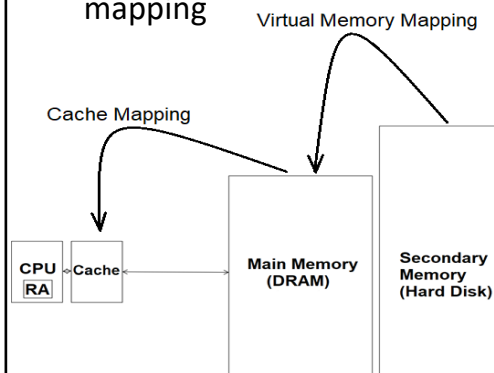


[illegible]

- Direct mapping
- Fully associative mapping
- (N-way) Set associative mapping


$$\text{Tag bits} = \log_2 2^5 = 5 \text{ bits}$$

- ❑ Poor performance if all three blocks are used frequently.

	Tag	Index	Block Offset
S	5	7	4

The diagram shows two memory structures:

- Cache Memory:** A table with 8 rows. The first column is labeled "Tag". The second column contains "Block 0", "Block 1", followed by four empty boxes, and finally "Block 127".
- Main Memory:** A vertical stack of 16 horizontal bars representing memory blocks. The top bar is labeled "Block 0", the second bar is labeled "Block 1", and the bottom-most bar is labeled "Block 4K - 1".

A red arrow points from the "Block 127" entry in the Cache Memory to the 16th bar in the Main Memory.