

ALGORITHM

1. Initialize

- Create an empty list **cache**
- Set **hit=0**
- Set **miss=0**

2. For each reference in the reference sequence

1. Check if reference is in the cache

- If yes-**HIT**
 - Increment hit by 1
 - Status=**HIT**
- If no-**MISS**
 - Increment miss by 1
 - Status=**MISS**
 - If cache is full(length equals **cache_size**):
 - Remove the first element in the cache(FIFO)
 - Append the current reference to cache

2. Print reference,current cache state,and status

3. After all references are processed

- Calculate **Hit Ratio**:
$$\text{Hit Ratio} = \text{hit} / (\text{hit} + \text{miss})$$
- Print Total Hits, Total Misses and Hit Ratio