1. **FIFO**

   This is the simplest page replacement algorithm. In this algorithm, the operating system keeps track of all pages in the memory in a queue, the oldest page is in the front of the queue. When a page needs to be replaced page in the front of the queue is selected for removal.

2. **OPTIMAL PAGE REPLACEMENT ALGORITHM:** Replace the page that will not be used for longest period of time as compared to the other pages in main memory. An optimal page replacement algorithm has lowest page fault rate of all algorithm. It is called as OPT or MIN.

   ADVANTAGE:

   1) This algorithm guarantees the lowest possible page-fault rate for a fixed no. of frames.

   DISADVANTAGE:

   1) The optimal page replacement algorithm is very difficult to implement, as it requires the knowledge of reference strings i.e. strings of memory references.

3. **LEAST RECENTLY USED (LRU):** LRU algorithm uses the time of the page's last usage. It uses the recent past as an approximation of the near future, then we can replace the page that has not been used for the longest period of the time i.e. the page having larger idle time is replaced.

3. Read number of pages no

4. Read page numbers into an array a[i]

5. Initialize avail[i]=0 .to check page hit

6. Replace the page with circular queue, while re-placing check page availability in the frame

Place avail[i]=1 if page is placed in the frame Count page faults

7. Print the results.

8. Stop the process.

2. LEAST RECENTLY USED

1.Start the process

2. Declare the size

3. Get the number of pages to be inserted

4. Get the value

5. Declare counter and stack

6. Select the least recently used page by counter value

7. Stack them according the selection.

8. Display the values

9. Stop the process

3. **OPTIMAL**

ALGORTHIM:

1. Start Program

2. Read Number Of Pages And Frames

3.Read Each Page Value

4. Search For Page In The Frames

5. If Not Available Allocate Free Frame

6. If No Frames Is Free Replace The Page With The Page That Is Least Used

7.Print Page Number Of Page Faults

8.Stop process.

Design diagrams (if any):

1. Class Diagram

Input:

1. Number of frames

idle time is replaced.

ADVANTAGE:

1) The LRU policy is often used for page replacement and is considered to be good.

DISADVANTAGES:

1) It is very difficult to implement.

2) Requires substantial hardware assistance.

3) The problematic determination of the order for the frames defined by the time of last usage

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Algorithm/Flowchart:

1. **FIFO :**

1. Start the process

2. Read number of pages n