**Experiment-31:Construct a C program to simulate the First in First Out paging technique of memory management.**

Aim:  
To simulate the First In First Out (FIFO) paging technique of memory management in C.

Procedure:

1. Take the number of pages and the number of frames as input.
2. Simulate the FIFO algorithm by storing pages in frames.
3. If a page needs to be loaded and all frames are occupied, replace the page that has been in memory the longest.
4. Keep track of page faults and display the results.

C Program:

#include <stdio.h>

int main() {

int frames, pages, page\_faults = 0, pointer = 0;

printf("Enter the number of frames: ");

scanf("%d", &frames);

printf("Enter the number of pages: ");

scanf("%d", &pages);

int page\_sequence[pages], frame[frames];

for (int i = 0; i < frames; i++) {

frame[i] = -1;

}

printf("Enter the page reference string: ");

for (int i = 0; i < pages; i++) {

scanf("%d", &page\_sequence[i]);

}

for (int i = 0; i < pages; i++) {

int page\_found = 0;

for (int j = 0; j < frames; j++) {

if (frame[j] == page\_sequence[i]) {

page\_found = 1;

break;

}

}

if (!page\_found) {

frame[pointer] = page\_sequence[i];

pointer = (pointer + 1) % frames;

page\_faults++;

}

printf("Frame state after page %d: ", page\_sequence[i]);

for (int j = 0; j < frames; j++) {

if (frame[j] != -1) {

printf("%d ", frame[j]);

} else {

printf(" - ");

}

}

printf("\n");

}

printf("Total page faults: %d\n", page\_faults);

return 0;

}

Output:

