Ex No.: 11a FIFO PAGE REPLACEMENT

Date : 16.04.2025

Aim :

To find out the number of page faults that occur using First-in First-out (FIFO) page replacement technique.

Code:

```
#include <stdio.h>

int main() {

    int frames, pages, i, j, k, page_faults = 0;

    printf("Enter number of frames: ");

    scanf("%d", &frames);

    printf("Enter number of pages: ");

    scanf("%d", &pages);

    int incoming[pages], temp[frames];

    printf("Enter page reference string: ");

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

        scanf("%d", &incoming[i]);

    }

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

        temp[i] = -1;

    }

    printf("\nPage\t Frame1\t Frame2\t Frame3\t Page Faults\n");

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

        int found = 0;

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

```
            if(temp[j] == incoming[i]) {
                found = 1;
                break;
            }
        }
        if(!found) {
            temp[page_faults % frames] = incoming[i];
            page_faults++;
        }
        printf("%d\t", incoming[i]);
        for(k = 0; k < frames; k++) {
            if(temp[k] != -1)
                printf("%d\t", temp[k]);
            else
                printf("-\t");
        }
        printf("%d\n", found ? 0 : 1);
    }
    printf("\nTotal Page Faults: %d\n", page_faults);
    return 0;
}
```

Output:

```
Enter number of frames: 3
Enter number of pages: 12
Enter page reference string: 1
2
3
4
1
2
5
1
2
3
4
5

Page      Frame1   Frame2   Frame3   Page Faults
1         1        -        -        1
2         1        2        -        1
3         1        2        3        1
4         4        2        3        1
1         4        1        3        1
2         4        1        2        1
5         5        1        2        1
1         5        1        2        0
2         5        1        2        0
3         5        3        2        1
4         5        3        4        1
5         5        3        4        0

Total Page Faults: 9
```

Result:

Thus the program to find out the number of page faults that occur using First-in First-out (FIFO) page replacement technique has been executed successfully.