Lab Report No. **11**

Lab Report Name: **Implementation of FIFO page replacement algorithm .**

## Objectives:

i. What is FIFO page replacement algorithm.
ii. How to implementation

## Theory:

This is the simplest page replacement algorithm. In a page replacement algorithm we decide when a page replacement occures then which frames are to be replaced. For evaluating an algorithm we take a particular string of memory references ,called reference string.

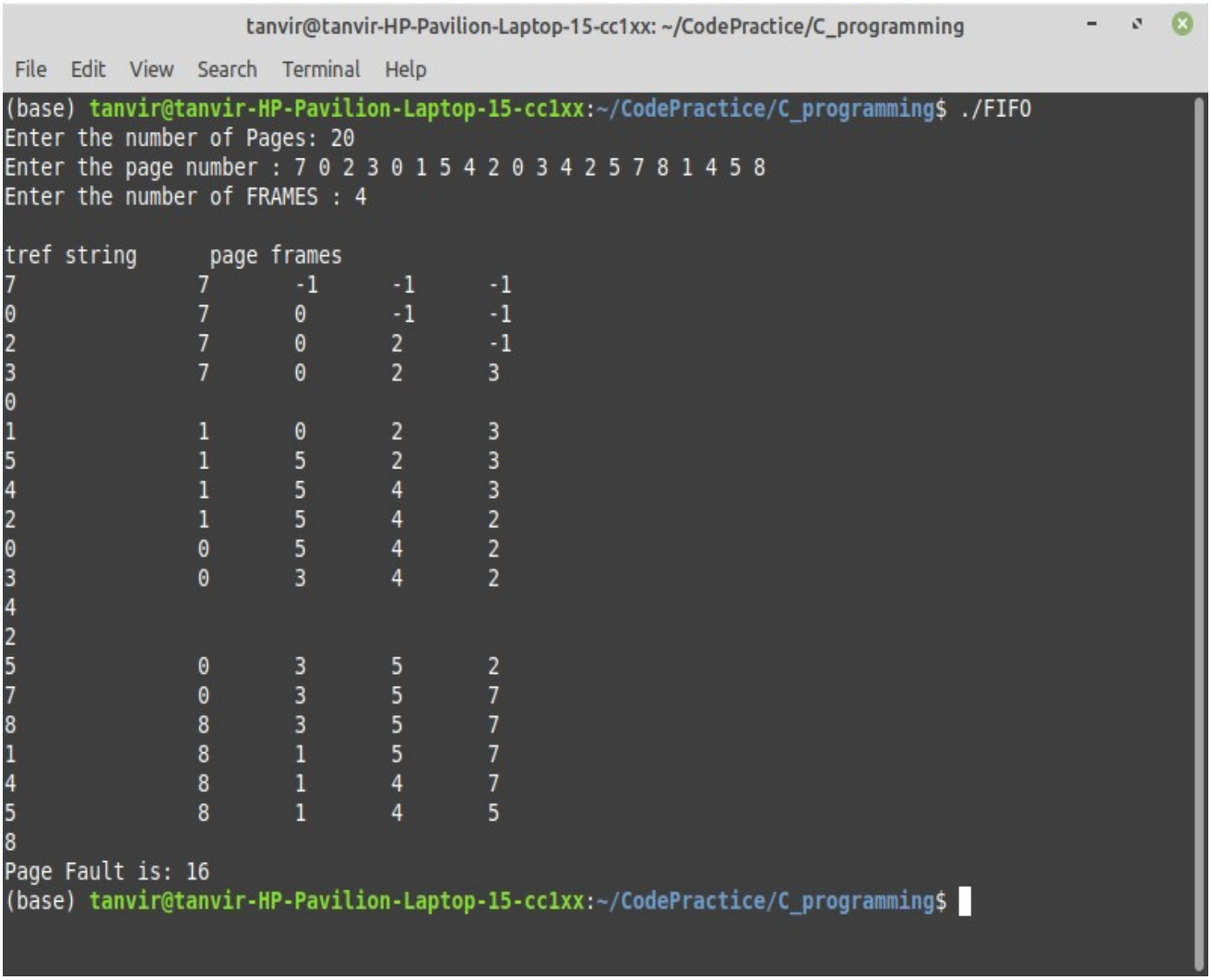
In FIFO page replacement algorithm- for each page we track the time when it was brought into the memory and when any replacement request comes then oldest page is chosen. If we choose a queue to hold all pages in memory then its more easy to understand and implement rather than tracking time of all pages.

## Corresponding Code:

```
#include<stdio.h>

int main()

{

   int i,j,n,a[50],frame[10],no,k,avail,count=0;

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

   scanf("%d",&n);

   printf("Enter the page number : ");

   for(i=1; i<=n; i++)

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

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

   scanf("%d",&no);
```

```
    for(i=0; i<no; i++)
        frame[i]= -1;
    j=0;
    printf("\n");
    printf("tref string\t page frames\n");

    for(i=1; i<=n; i++)
    {
        printf("%d\t\t",a[i]);
        avail=0;
        for(k=0; k<no; k++)
            if(frame[k]==a[i])
                avail=1;
        if (avail==0)
        {
            frame[j]=a[i];
            j=(j+1)%no;
            count++;
            for(k=0; k<no; k++)
                printf("%d\t",frame[k]);
        }
        printf("\n");
    }
    printf("Page Fault is: %d",count);
    printf("\n");
    return 0;
}
```

## Output:


tanvir@tanvir-HP-Pavilion-Laptop-15-cc1xx: ~/CodePractice/C_programming
File Edit View Search Terminal Help
(base) tanvir@tanvir-HP-Pavilion-Laptop-15-cc1xx:~/CodePractice/C_programming$ ./FIFO
Enter the number of Pages: 20
Enter the page number : 7 0 2 3 0 1 5 4 2 0 3 4 2 5 7 8 1 4 5 8
Enter the number of FRAMES : 4
tref string page frames
7 7 -1 -1 -1
0 7 0 -1 -1
2 7 0 2 -1
3 7 0 2 3
0
1 1 0 2 3
5 1 5 2 3
4 1 5 4 3
2 1 5 4 2
0 0 5 4 2
3 0 3 4 2
4
2
5 0 3 5 2
7 0 3 5 7
8 8 3 5 7
1 8 1 5 7
4 8 1 4 7
5 8 1 4 5
8
Page Fault is: 16
(base) tanvir@tanvir-HP-Pavilion-Laptop-15-cc1xx:~/CodePractice/C_programming$