



Mawlawi Bhashani Science and Technology University

Lab-Report

Lab Report No: 11

Lab Report Name: Implementation of FIFO page replacement Algorithm.

Course code: ICT-3110

Course title: Operating System Lab

Date of Performance: 7/9/2020

Date of Submission:

Submitted by

Name: Afra Ibnat Tethye
ID: IT-18055
3rd year 1st semester
Session: 2017-18
Dept. of ICT

Submitted To

Nazrul Islam
Assistant Professor
Dept. of ICT,
MBSTU.

Experiment Name: Implementation of FIFO page replacement Algorithm.

Question-01:

What is FIFO page replacement algorithm?

Answer:

First in first out (FIFO) is the simplest page replacement algorithm. In this algorithm , a queue is maintained. The page which is assigned the frame first will be replaced first. 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

Question-02:

How to implemented in C?

Answer:

```
#include<stdio.h>

int main() {

    int i,j,n,a[45],f[30],no,k,av,count=0;

    printf("\n ENTER THE NUMBER OF PAGES: ");
    scanf("%d",&n);

    printf("\n ENTER THE PAGE NUMBER : ");    for(i=1;
    i<=n; i++)      scanf("%d",&a[i]);

    printf("\n ENTER THE NUMBER OF FRAMES :");
    scanf("%d",&no);    for(i=0; i<no; i++)      f[i]= -1;    j=0;

    printf("\tref string\t page frames\n");    for(i=1;
    i<=n; i++)

    {      printf("%d\t\t",a[i]);
    av=0;
```

```

for(k=0; k<no; k++)
if(f[k]==a[i])

    av=1;

    if (av==0)

    {      f[j]=a[i];

        j=(j+1)%no;

        count++;

    for(k=0; k<no; k++)
printf("%d\t",f[k]);

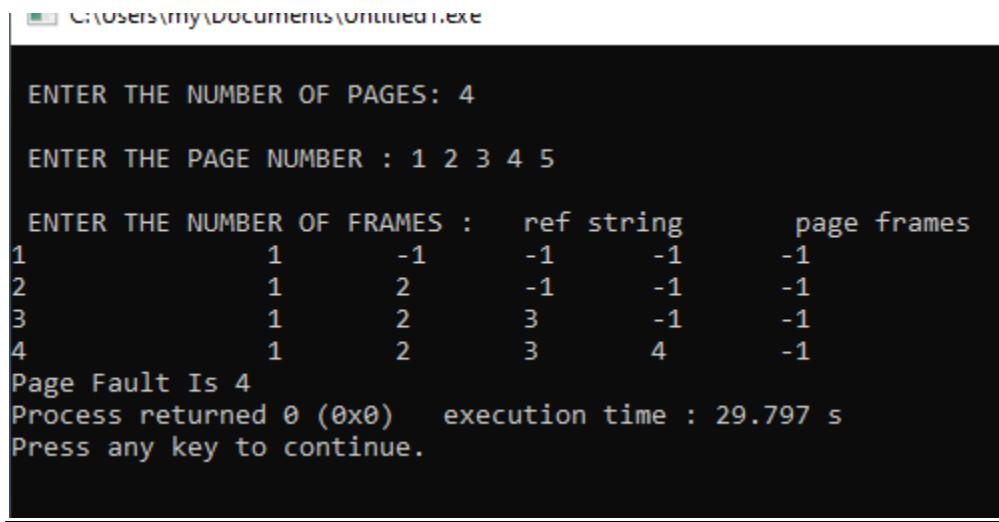
    }      printf("\n");

}

printf("Page Fault Is %d",count);  return 0;

```

Output:



```

C:\Users\my\Documents\Untitled1.exe

ENTER THE NUMBER OF PAGES: 4

ENTER THE PAGE NUMBER : 1 2 3 4 5

ENTER THE NUMBER OF FRAMES :      ref string      page frames
1                  1          -1          -1          -1
2                  1          2          -1          -1
3                  1          2          3          -1          -1
4                  1          2          3          4          -1

Page Fault Is 4
Process returned 0 (0x0)   execution time : 29.797 s
Press any key to continue.

```

Conclusion:

Certain data structures like Queue and other variants of Queue uses FIFO approach for processing data. Disk controllers can use the FIFO as a disk scheduling algorithm to determine the order in which to service disk I/O requests. Communication network bridges, switches and routers used in computer networks use FIFOs to hold data packets en route to their next destination.

