Mawlana Bhashani Science and Technology University

Lab-Report

Report No:

Course code: ICT-3110

Course title: Operating Systems Lab

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Lab report name:Implementation of FIFO page replacement Algorithm.

Objectives:

- As the name suggests, this algorithm works on the principle of "**First in First out**".
- It replaces the oldest page that has been present in the main memory for the longest time.
- It is implemented by keeping track of all the pages in a queue

Question No.1. What is FIFO page replacement Algorithm?

Answer: This page replacement algorithm is very easy and simple because this algorithm is based on the "First in First out"principle. In which operating system uses the line as queue that store all information of all pages in the computer memory.As per FIFO principle, oldest page is replaced at the front side and most recent page is replaced at the rear side.

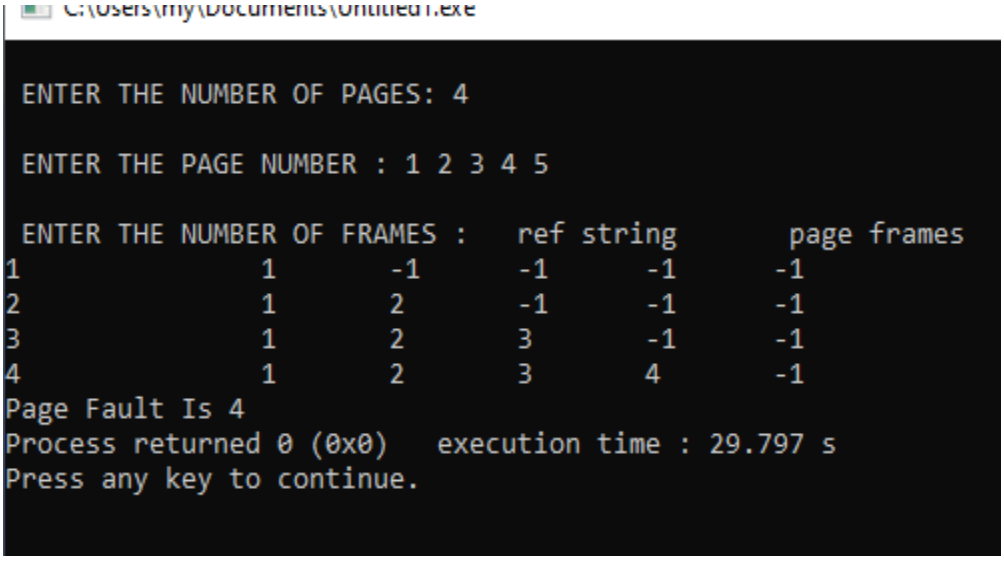
Question No.2 How to implement in C?

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:



Conclusion:

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.