

Subject: Operating System	Subject Code:22516
Semester: 5th Semester	Course: Computer Engineering
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Experiment No:	15
Title of Experiment	Write a C program to implement FIFO page replacement Algorithm.

X. Program Code

1. Page Replacement Stream :

12321521625631361243

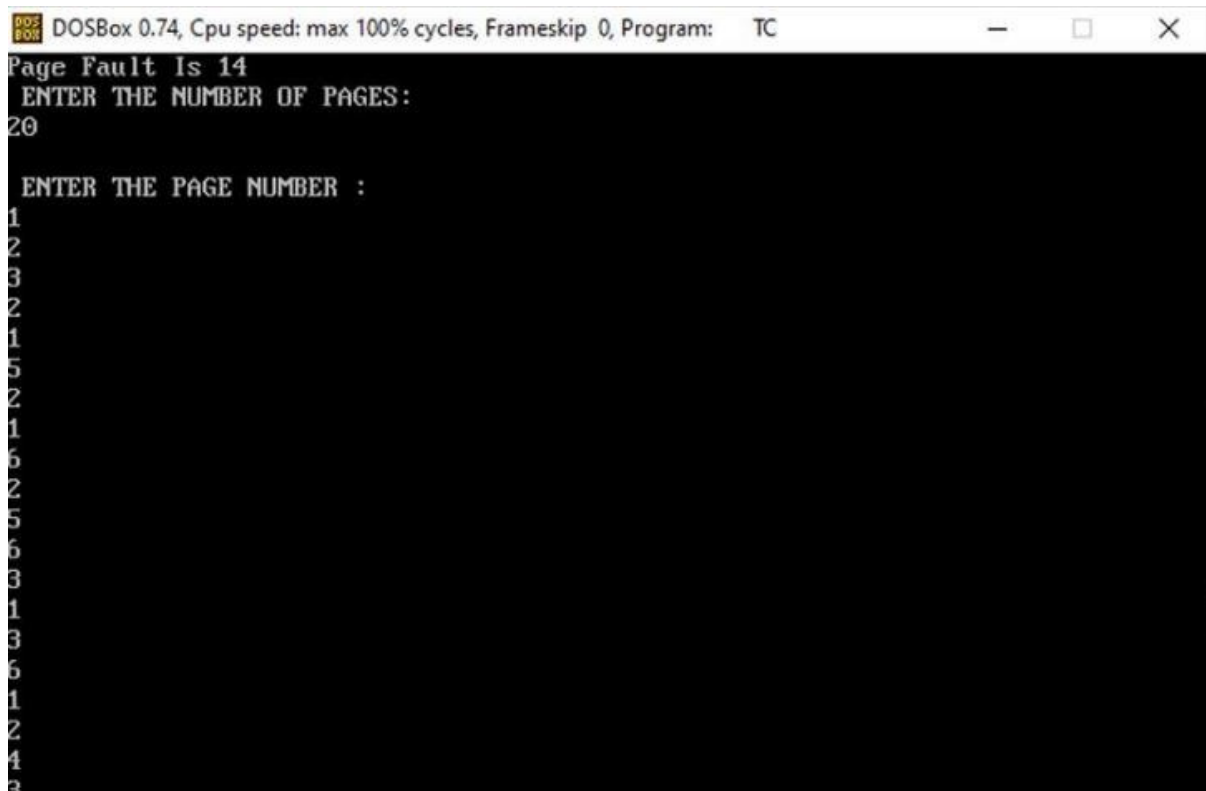
Ans:

```
#include <stdio.h>
int
main()
{
    int i,j,n,a[50],frame[10],no,k, Flag,count=0; printf("\n
    ENTER THE NUMBER OF PAGES:\n");
    scanf("%d",&n);
    printf("\n ENTER THE PAGE NUMBER :\n");
    for(i=1;i<=n;i++)
        scanf("%d",&a[i]);
    printf("\n ENTER THE NUMBER OF FRAMES :");
    scanf("%d",&no);

    for(i=0;i<=n;i++)
    {
```

```
    printf("%d\t\t",a[i]);  
    Flag =0;  
    for(k=0;k<no;k++)  
        if(frame[k]==a[i])  
            Flag=1;  
    if (Flag==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);  
return 0;  
getch();  
}
```

XI. Result (Output of code)



```
DOSBox 0.74, Cpu speed: max 100% cycles, Frameskip 0, Program: TC
Page Fault Is 14
ENTER THE NUMBER OF PAGES:
20
ENTER THE PAGE NUMBER :
1
2
3
2
1
5
2
1
6
2
5
6
3
1
3
6
1
2
4
3
```

XII. Practical Related Questions

1. State the advantages and disadvantages of FIFO

Ans:

Advantages:

FIFO method is easy to understand and operate.

FIFO method is suitable for bulky materials with high unit prices. FIFO method helps to avoid deterioration and obsolescence.

Value of closing stock of materials will reflect the current market price.

Disadvantages :

FIFO method is improper if many lots are purchased during the period at different prices.

FIFO method overstates profit especially in inflation

2. What is page hit ?

If CPU tries to retrieve the needed page from main memory, and that page is existed in the main memory (RAM), then it is known as PAGE HIT.

3. What is page Fault?

A page fault (PF or hard fault) is a type of exception raised by computer hardware when a running program accesses a memory page that is not currently mapped by the memory management unit (MMU) into the virtual address space of a process.

XIII. Exercise

1. Compare FIFO and LRU

FIFO	LRU
FIFO is First in First out	LRU is Least Recently used
Number of page fault is more than LRU	Number of page fault is less than FIFO
Simple to implement	Considered to be good

Grade and Dated Signature of Teacher	Process Related (35)	Product Related (15)	Dated Sign