Ex. No.: 11 a
Date: 7.5.24

FIFO PAGE REPLACEMENT

Aim:

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

Algorithm:

1. Declare the size with respect to page length
2. Check the need of replacement from the page to memory
3. Check the need of replacement from old page to new page in memory
4. Form a queue to hold all pages
5. Insert the page require memory into the queue
6. Check for bad replacement and page fault
7. Get the number of processes to be inserted
8. Display the values

Program Code: // vi fifo.py

```
def fifo():
    global a,m,n
    f = -1
    page_faults=0
    page = []
    for i in range(m):
        page.append(-1) e
    for i in range(n):
        flag=0
        for j in range(m):
            if(page[j] == a[i]):
                flag=1
                break
        if flag==0:
            f=(f+1)%.m
            page[f]=a[i]
            page_faults+=1
        print("\n", a[i],"->", end="  ")
```

```
        for j in range(nn):
            if page[j] != -1:
                print(page[j], end = "  ");
            else:
                printf (" - " , end = "  ");

    else:
        printf("\n", a[i], " -> No page Fault ");

print("\n Total page faults:", page_faults)


a = []
n = int(input("\n Enter size of reference string: "))
for i in range(n):
        a.append(int(input(f" Enter {i+1} : ")))

m = int(input("\n Enter page frame size : "))
fifo()
```

Output: python3 fifo.py

```
enter size of reference string: 20
enter 1 : 7
enter 2 : 0
Enter 3 : 1
enter 4 : 2
enter 5 : 0
enter 6 : 3
Enter 7 : 0
enter 8 : 4
Enter 9 : 2
Enter 10 : 3
Enter 11 : 0
Enter 12 : 3
enter 13 : 2
Enter 14 : 1
Enter 15 : 2
enter 16 : 0
Enter 17 : 1
Enter 18 : 7
Enter 19 : 0
Enter 20 : 1
```

enter page frame size: ~~30~~ 3

7 → - → -	0 → 2 → 3
7 → 0 → -	0 → 2 → 3
7 → 0 → 1	0 → 1 → 3
2 → 0 → 1	0 → 1 → 7
2 → 0 → 1	0 → 1 → 7
2 → 3 → 1	0 → 1 → 7
2 → 3 → 0	
4 → 3 → 0	
4 → 2 → 0	
4 → 2 → 3	
0 → 2 → 3	

Total page faults = 9

RESULT:
The program has been compiled and executed successfully.