

OS LAB MANUAL (CS23431)

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EX.NO:11(A)

FIFO PAGE REPLACEMENT

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

Program:

```
from collections import deque

ref_str = []

frames = deque()

page_faults = 0

n = int(input("Enter the size of reference string: "))

for i in range(n):

    val = int(input(f"Enter [{i + 1}] : "))

    ref_str.append(val)

frame_size = int(input("Enter page frame size : "))

print()

for page in ref_str:

    if page not in frames:

        if len(frames) < frame_size:

            frames.append(page)

        else:

            frames.popleft()

            frames.append(page)

        page_faults += 1

    print(f"{page} ->", end=' ')

    for f in frames:

        print(f, end=' ')
```

```
    for _ in range(frame_size - len(frames)):
        print("-", end=' ')
    print()
else:
    print(f"{page} -> No Page Fault")
print(f"\nTotal page faults: {page_faults}")
```

Input:

```
Enter the size of reference string: 4
Enter [1] : 6
Enter [2] : 8
Enter [3] : 7
Enter [4] : 3
Enter page frame size: 2
```

Output:

```
6 -> 6 -
8 -> 6 8
7 -> 8 7
3 -> 7 3

Total page faults: 4
```