OS LAB MANUAL (CS23431)

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:

```python
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=' ')
```

```python
        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:

```
praveen@LAPTOP-Q0D8O6DB:~$ python3 fifo.py
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:

```
praveen@LAPTOP-Q0D8O6DB:~$ python3 fifo.py
Enter the size of reference string: 4
Enter [1] : 6
Enter [2] : 8
Enter [3] : 7
Enter [4] : 3
Enter page frame size : 2

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

Total page faults: 4
```