Ex 11a)	FIFO Page Replacement Algorithm
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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:

```
def display(page):
    for i,val in enumerate(page):
        if val == -1:
            print("- ",end="")
        else:
            print(f"{val} ",end="")

    print()

n = int(input("Enter the size of reference string:"))
mem =[]
print(f"Enter the {n} strings")
for i in range(1,n+1):
    mem.append(int(input(f"Enter[{i}]:")))

p = int(input("Enter the page frame size:"))
page = []
for i in range(0,p):
    page.append(-1)

page_fault =0
fifo = 0
for key in mem:
    found = 0
    fifo = fifo % p
    for j in range(0,p):
        if page[j]==key:
```

```
        print("No page Fault")
        found = 1
        break
    if found == 0:
        page[fifo] = key
        page_fault += 1
        fifo += 1
        print(f"{key}->",end="")
        display(page)

print(f"The Total no. of Page Fault:{page_fault}")
```

Console:


```
C:\Users\kambm\OneDrive\Desktop\Madhumitha\sem IV\OS Assignment\Final version>py FIFO_FINAL.py
Enter the size of reference string:20
Enter the 20 strings
Enter[1]:7
Enter[2]:1
Enter[3]:0
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 the page frame size:3
```

```
7->7 - -
1->7 1 -
0->7 1 0
2->2 1 0
No page Fault
3->2 3 0
No page Fault
4->2 3 4
No page Fault
No page Fault
0->0 3 4
No page Fault
2->0 2 4
1->0 2 1
No page Fault
No page Fault
No page Fault
7->7 2 1
0->7 0 1
No page Fault
The Total no. of Page Fault:11

C:\Users\kambm\OneDrive\Desktop\Madhumitha\sem IV\OS Assignment\Final version>
```

Result: Thus the program was executed successfully.