

Ex. No.: 11a)

Date: 12-4-25

### 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:

```
#include <stdio.h>
int main() {
    int n, i, j, page, frame_size, page_faults = 0;
    int ref_str[100], memory[10], index = 0, found;
    printf("Enter the size of reference string: ");
    scanf("%d", &n);
    for(i=0; i<n; i++) {
        printf("Enter reference string: ", i+1);
        scanf("%d", &ref_str[i]);
    }
    printf("Enter page frame size: ");
    scanf("%d", &frame_size);
    for(i=0; i<frame_size; i++) {
        memory[i] = -1;
    }
    printf("\n");
    for(i=0; i<n; i++) {
```

```
page = ref->ptr[i];
```

```
found = 0;
```

```
for(j=0; j < frame_size; j++) {
```

```
    if (memory[i] == page) {
```

```
        found = 1;
```

```
        break;
```

```
}
```

```
if (!found) {
```

```
    memory[index] = page;
```

```
    index = (index + 1) % frame_size;
```

```
    page_faults++;
```

```
    printf("1.d->", page);
```

```
    for(j=0; j < frame_size; j++) {
```

```
        if (memory[i] == -1)
```

```
            printf("-");
```

```
        else
```

```
            printf("1.d ", memory[i]);
```

```
}
```

```
    printf("\n");
```

~~```
} else {
```~~~~```
    printf("1.d->No page fault\n", page);
```~~~~```
}
```~~

```
}
```

```
printf("\n Total page faults : 1.d \n", page_faults);
```

```
return 0;
```

```
}
```

Output:

Enter the size of reference string : 3

Enter [1] reference string : 1

Enter [2] reference string : 2

Enter [3] reference string : 3

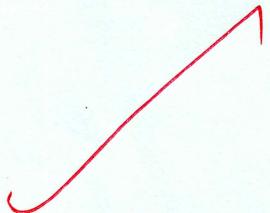
Enter page frame size: 2

1 → 1 \_

2 → 1 2

3 → 3 2

TOTAL page faults: 3



1 -> 7 0 1  
Total page faults: 15.  
[root@localhost student]#

Q1k

**Result :**

thus the above program to find the no. of page faults that occur using First-in First-out page replacement technique has been executed successfully.