

OPERATING SYSTEM - CS23431

EXP 11(A)

FIFO PAGE REPLACEMENT

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PROGRAM:

```
#include <stdio.h>
```

```
int main() {
```

```
    int n, frame_size, front = 0, count = 0, page_faults = 0;
```

```
    printf("Enter size of reference string: ");
```

```
    scanf("%d", &n);
```

```
    int pages[n];
```

```
    for (int i = 0; i < n; i++) {
```

```
        printf("Enter [%d]: ", i + 1);
```

```
        scanf("%d", &pages[i]);
```

```
    }
```

```
    printf("Enter page frame size: ");
```

```
    scanf("%d", &frame_size);
```

```
    int mem[frame_size];
```

```
    for (int i = 0; i < n; i++) {
```

```

int found = 0;

// Check if page is already in memory
for (int j = 0; j < count; j++) {
    if (mem[j] == pages[i]) {
        found = 1;
        break;
    }
}

printf("%d -> ", pages[i]);
int f = 1;

if (!found) {
    if (count < frame_size) {
        mem[count++] = pages[i];
    } else {
        mem[front] = pages[i];
        front = (front + 1) % frame_size;
    }
    page_faults++;
} else {
    f = 0;
    printf("No Page Fault ");
}

```

```

    if (f) {
        for (int j = 0; j < count; j++) {
            printf("%d ", mem[j]);
        }
    }

    printf("\n");
}

printf("\nTotal Page Faults: %d\n", page_faults);

return 0;
}

```

OUTPUT:

```

Enter size of reference string: 7
Enter [1]: 7
Enter [2]: 0
Enter [3]: 1
Enter [4]: 2
Enter [5]: 0
Enter [6]: 3
Enter [7]: 0
Enter page frame size: 3
7 -> 7
0 -> 7 0
1 -> 7 0 1
2 -> 2 0 1
0 -> No Page Fault
3 -> 2 3 1
0 -> 2 3 0

Total Page Faults: 6

```