

CS23431 - OPERATING SYSTEM

EXP 11(B) - LRU PAGE REPLACEMENT

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PROGRAM:

```
#include <stdio.h>

int main() {
    int n, frame_size, count=0, page_faults=0;    printf("Enter
    size of reference string: "); scanf("%d",&n);
    int page[n];
    for(int i=0;i<n;i++)
    {
        printf("Enter [%d]: ",i+1);
        scanf("%d",&page[i]);
    }
    printf("Enter page frame size: ");
    scanf("%d",&frame_size);
    int mem[frame_size];
        for (int i = 0; i < n; i++) { int top = -1;
    int f=0;
    for (int j = 0; j < count; j++) { if (mem[j] ==
    page[i]) {
        top = j; break;
    }
    }

    printf("%d -> ", page[i]); if (top!=-1) {
    for(int j=0;j<count-1;j++)
    {
        mem[j]=mem[j+1];
    }
    mem[count-1]=page[i];
    printf("No page fault\n");
    }
    else
    {
        f=1;
        if(count<frame_size)
        {
            mem[count++]=page[i];
        }
        else
        {
            for(int j=0;j<frame_size;j++)
            {
                mem[j]=mem[j+1];
            }
            mem[frame_size-1]=page[i];
        }
        page_faults++;
    }
    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: 6  
Enter [1]: 5  
Enter [2]: 7  
Enter [3]: 5  
Enter [4]: 6  
Enter [5]: 7  
Enter [6]: 3  
Enter page frame size: 3  
5 -> 5  
7 -> 5 7  
5 -> No page fault  
  
6 -> 7 5 6  
7 -> No page fault  
  
3 -> 6 7 3  
  
Total Page Faults: 4
```