OPERATING SYSTEM - CS23431

EXP 11(B)

LRU PAGE REPLACEMENT

NAME: KEERTHIVARMAN.A.B **ROLLNO:230701151**

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
```