LAB-3

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#include <stdio.h>
#define maxsize 4
void enqueue(int *queue, int *front, int *rear){
    int ele;
    if (*rear >= maxsize - 1){
        printf("Queue overflow");
        return;
    }
    if (*front == -1)
        (*front)++;
    (*rear)++;
    printf("Enter element:");
    scanf("%d", &ele);
    *(queue + *rear) = ele;
}

void display(int *queue, int front, int rear){
    if (front == -1 && rear == -1)
        printf("Empty queue");
    else{
        printf("Elements in queue:");
        for(int i=front; i<=rear; i++)
            printf("%d", *(queue+i));
    }
}

void dequeue(int *queue, int *front, int *rear){
    int ele;
    if (*front == -1 && *rear == -1){
        printf("Queue underflow");
        return;
    }
```

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    else if(*front == *rear){
        ele = *(queue + *front);
        *front = -1;
        *rear = -1;
    }
    else {
        ele = *(queue + *front);
        (*front)++;
    }
    printf("Deleted element : %d", ele);
}

void main(){
    int front1 = -1, rear1 = -1;
    int queue1[maxsize];
    int choice;
    do {
        printf("1. Enqueue\n2. Dequeue\n3. Display\n4. Exit\nEnter your
               choice : ");
        scanf("%d", &choice);

        switch(choice){
            case 1: enqueue(queue1, &front1, &rear1); break;

            case 2: dequeue(queue1, &front2, &rear1); break;

            case 3: display(queue1, front1, rear1); break;
        }
    } while(choice != 4);
}
```