

## LAB 4

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#include <stdio.h>
#include <stdlib.h>
int front = -1, rear = -1;

int main()
{
    int ch, item, MAX, i;
    printf("Enter size: ");
    scanf("%d", &MAX);
    int queue[MAX];
    do {
        printf("1. Insert\n2. Delete\n3. Display\n4. Exit\nEnter your choice: ");
        scanf("%d", &ch);
        switch (ch) {
            case 1: if (front == (rear + 1) % MAX)
                    printf("Queue full");
                    else {
                        printf("Enter element: ");
                        scanf("%d", &item);
                        rear = (rear + 1) % MAX;
                        queue[rear] = item;
                        if (front == -1)
                            front = 0;
                    }
                    break;

            case 2: if (front == -1 && rear == -1)
                    printf("Queue empty");
                    else {
                        item = queue[front];
                        front = (front + 1) % MAX;
                    }
                    break;

            case 3:
                // Display logic
                break;

            case 4:
                // Exit logic
                break;
        }
    } while (ch != 4);
}
```

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        if (front == rear) {
            front = -1;
            rear = -1;
        }
        else
            front = (front + 1) % MAX;
        printf("Removed element is %d\n", item);
    }
    break;

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case 3: printf("Queue contents are: ");
        for (i = front; i != rear; i = (i + 1) % MAX)
            printf("%d", queue[i]);
        printf("%d", queue[i]);
        printf("\n");
        break;

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case 4: exit(0);

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    }
    while (ch != 4);
    return 0;

```

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}

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