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// first.c
#include <stdio.h>
#include <stdlib.h>
#define MAX 256
#define ADD 1
#define REMOVE 0
#define LIST 2
int main(int argc, char * * argv)
{
    int queue[MAX];
    int size = 0;
    int front = 0;
    int pos = 0;
    int val;
    int iChoice;
    int iNRead;
    int i;

    /* Processing loop */
    printf("Choice (1=add, 0=remove, 2=list): ");
    iNRead = scanf("%d", &iChoice);
    while(iNRead == 1)
    {
        switch(iChoice)
        {
            case ADD:
                printf("Value to add: ");
                // Read the element, add it to the queue
                int valE;
                valE = scanf("%d", &val);
                if(size < MAX)
                {
                    int pos1 = (front+size)%MAX;
                    queue[pos1] = val;
                    size++;
                }
                break;

            case REMOVE:
                // Print out the last element and remove it.
                if(size > 0)
                {
                    val = queue[size-1];
                    front = (front + 1)%MAX;
                }
                break;

            case LIST:
                // Print out the list
                for(i = front; i < front+size; i++)
                {
                    printf("%d ", queue[i]);
                    if(i % 10 == 9)
                        printf("\n");
                }
                break;
        }
    }
}

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        printf("Removed element: %d\n", val);
        size--;
    }
    else
    {
        printf("Queue is empty");
    }
    break;

case LIST:
    // Print out the queue elements
    for(i = 0; i < size; i++)
    {
        printf("%d\n", queue[i]);
    }
    break;
}
printf("Choice (1=add, 0=remove, 2=list): ");
iNRead = scanf("%d", &iChoice);
}
return EXIT_SUCCESS;
}

```

Output:

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C:\Users\srvik\OneDrive\Desktop\UNB\Summer2020\CS2263\Lectures\Week2\Day8_May14\L8src>test
Choice (1=add, 0=remove, 2=list): 1
Value to add: 23
Choice (1=add, 0=remove, 2=list): 1
Value to add: 11
Choice (1=add, 0=remove, 2=list): 1
Value to add: 6
Choice (1=add, 0=remove, 2=list): 2
23
11
6
Choice (1=add, 0=remove, 2=list): 0
Removed element: 6
Choice (1=add, 0=remove, 2=list): 2
23
11

```