

QUEUE USING ARRAY

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    /*****      Program to Implement Queue using Array      *****/

#include <stdio.h>

#define MAX 50

void insert();
void delet();
void display();

int queue[MAX], rear=-1, front=-1, item;

main()
{
    int ch;
    do
    {
        printf("\n\n1. Insert\n2. Delete\n3. Display\n4. Exit\n");
        printf("\nEnter your choice: ");
        scanf("%d", &ch);

        switch(ch)
        {
            case 1:
                insert();
                break;

            case 2:
                delet();
                break;

            case 3:
                display();
                break;

            case 4:
                exit(0);

            default:
                printf("\n\nInvalid entry. Please try again...\n");
        }
    } while(1);
    getch();
}

```

```
void insert()
{
    if(rear == MAX-1)
        printf("\n\nQueue is full.");
    else
    {
        printf("\n\nEnter ITEM: ");
        scanf("%d", &item);

        if (rear == -1 && front == -1)
        {
            rear = 0;
            front = 0;
        }
        else
            rear++;

        queue[rear] = item;
        printf("\n\nItem inserted: %d", item);
    }
}

void delet()
{
    if(front == -1)
        printf("\n\nQueue is empty.");
    else
    {
        item = queue[front];

        if (front == rear)
        {
            front = -1;
            rear = -1;
        }
        else
            front++;

        printf("\n\nItem deleted: %d", item);
    }
}
```

```
void display()
{
    int i;

    if(front == -1)
        printf("\n\nQueue is empty.");
    else
    {
        printf("\n\n");

        for(i=front; i<=rear; i++)
            printf("  %d", queue[i]);
    }
}
```

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