# Queue

**Write a C program that implements a queue as (using) an array. OR**

**Write a C program that performs the basic operations on a queue using an array. OR**

**Write a C program for queue with the use of (using) an array.**

```
#include <stdio.h>
#include <conio.h>
#include <stdlib.h>


void main()
{
	int queue[5], front = -1, rear = -1, element = 0, choice = 0, i = 0;
	do
	{
		clrscr();
		printf("\n Main Menu (Basic Operations On Queue)");
		printf("\n 1. ADD (INSERT)");
		printf("\n 2. DELETE (REMOVE)");
		printf("\n 3. DISPLAY");
		printf("\n 4. EXIT");
		printf("\n Enter your choice: ");
		scanf("%d", &choice);
		switch(choice)
		{
			case 1:
				if((rear == 4)
				{
					printf("\n Queue is full (queue overflow)");
				}
				else
				{
					printf("Enter an element to be added: ");
					scanf("%d", &element);
					rear = rear + 1;
					queue[rear] = element;
					if(front == -1)
					{
						front = 0;
					}
				}
				break;
			case 2:
				if(front == -1)
				{
					printf("Queue is empty (queue underflow)");
```

```
                }
                else
                {
                        element = queue[front];
                        if(front == rear)
                        {
                                front = -1;
                                rear = -1;
                        }
                        else
                        {
                                front = front + 1;
                        }
                        printf("Deleted element is %d.", element);
                }
                break;
        case 3:
                if(front == -1)
                {
                        printf("Queue is empty (queue underflow)");
                }
                else
                {
                        printf("Queue elements: ");
                        for(i = front; i <= rear; i++)
                        {
                                printf("\n %d", queue[i]);
                        }
                }
                break;
        case 4:
                exit(0);
                break;
        default:
                printf("\n Invalid choice");
        }
        getch();
    } while(choice != 4);
}
```