

## Lab Program 8 b :- Queue

struct node

```
{  
    int data;  
    struct node *next;  
};
```

```
void enq ( struct node **headptr, int value)
```

```
{  
    struct node *newnode;  
    newnode = (struct node *) malloc ( sizeof (struct node));  
    newnode->data = value;  
    newnode->next = NULL;  
    if (*headptr == NULL)  
        *headptr = newnode;
```

```
    else
```

```
    {  
        newnode->next = *headptr;  
        *headptr = newnode;  
    }
```

```
}
```

```
void deq ( struct node **headptr)
```

```
{  
    struct node *temp;
```

```
    temp = *headptr;
```

```
    if (temp == NULL)
```

```
    {  
        printf ("The list is empty!\n");  
        return;
```

```
    }
```

```
    else if (temp->next == NULL)
```

```
    {  
        *headptr = NULL;  
        printf ("Last element has been deleted!\n");  
        return;
```

```
    }
```

```
    else
```

```
    {
```

```
        while (temp->next->next != NULL)
```

```
            temp = temp->next;
```

```
        temp->next = NULL;
```

```
        printf ("Rear element has been deleted!\n");
```

```
    }
```

```
}
```

```
void display (struct node * temp)
```

```
{  
    if (temp == NULL)
```

```
{  
        printf ("The list is empty!! : \n");  
        return;
```

```
}
```

```
else
```

```
{  
        while (temp != NULL)
```

```
{  
            printf ("1. %d\t", temp->data);  
            temp = temp->next;
```

```
}
```

```
printf ("\n");
```

```
}
```

```
}
```