

DS LAB - 1

Saathi

Date ___/___/___

Name- Amit Kumar

USN - 1BM19CS015

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

```
# define max 5
```

```
int insert ( char queue [max][80], int *rear,
             char data [80] )
```

```
{ if (*rear == max-1)
    return (-1);
```

```
else
```

```
{ *rear = *rear + 1;
  str cpy ( queue [*rear], data );
```

```
return(1);
```

```
}
```

```
}
```

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```
int delete (char queue[max][80], int *front,
            int *rear, char data[80])
{
    if (*front == *rear)
        return(-1);
    else
    {
        (*front)++;
        strcpy (data, queue[*front]);
        return(1);
    }
}
```

```
int main ()
{
    char queue[max][80], data[80];

    int front, rear, reply;
    int ch;
    front = rear = -1;

    printf (" <----- |n");
```

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```
printf("It Menu");
```

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

```
printf("\n 1. Insert Details to a Queue");
```

```
printf("\n 2. Delete Details from a Queue");
```

```
printf("\n 3. Exit");
```

```
while (1)
```

```
{
```

```
    printf("choose option : ");
```

```
    scanf("%d", &ch);
```

```
    switch (ch)
```

```
    {
```

```
        case 1: // to Insert details
```

```
            printf("\n Enter details : ");
```

```
            scanf("%s", &data);
```

```
            reply = Insert(queue, &rear, data);
```

```
            if (reply == -1)
```

```
                printf("Queue is full\n");
```


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else

```
printf ("|n %s' is inserted in queue.|n|n",  
       data);  
break;
```

Case 2: // delete the details

```
reply = delete (queue, &front, &rear, data);
```

```
if (reply == -1)  
printf ("|n Queue is empty |n");
```

else

```
printf ("|n Deleted details are:- %s |n", data);
```

```
printf ("|n");  
break;
```

Case 3: exit (0);

```
default: printf ("|n Invalid operation |n");  
}
```

}

```
return 0;
```

}