Program 6:

Develop a menu driven Program in C for the following operations on Circular QUEUE of Characters (Array Implementation of Queue with maximum size MAX)

a. Insert an Element onto Circular QUEUE
b. Delete an Element from Circular QUEUE
c. Demonstrate Overflow and Underflow situations on Circular QUEUE
d. Display the status of Circular QUEUE
e. Exit Support the program with appropriate functions for each of the above operations.

```
#include<stdio.h>
#include<stdlib.h>
#define SIZE 5
int q[SIZE], i, r=-1, f=0, option, count=0, j;
int main( )
{
for(;;)
{
printf("\n 1.Insert 2.Delete\n 3.Display 4.Exit");
printf("\nEnter your option:");
scanf("%d",&option);
switch(option)
{
case 1: //Inserting items to Queue
if(count==SIZE)
printf("\n Q is Full\n");
else
{
}
break;
r=(r+1)%SIZE;
printf("\nEnter the item:");
scanf("%d",&q[r]);
count++;
case 2: //Deleting items from Queue
if(count==0)
printf("\nQ is empty\n");
else
{
}
break;
printf("\nDeleted item is: %d",q[f]);
```

```
count--;
f=(f+1)%SIZE;
case 3: //Displaying items from Queue
if(count==0)
printf("\nQ is Empty\n");
else
{
i=f;
for(j=0;j<count;j++)
{
}
}
break;
printf(" %d",q[i]);
i=(i+1)%SIZE;
default: exit(0);
}
}
}
```