3) **Linear Queue Program**

```
#include <stdio.h>
#include <stdlib.h>
#define MAX 5

int queue [MAX];
void enqueue (int value, int *front, int *rear) {
if (*rear = = MAX-1)
printf ("Queue is full !!");
else {
 if (*front = = -1)
  *front = 0;
 (*rear) ++ ;
 queue [*rear] = value ;
}
}

void dequeue (int *front , int *rear) {
if (*front = = *rear)
printf ("\n Queue is Empty !!");
else {
printf ("Deleted = %d", queue [*front]);
(*front) ++ ;
if (*front = = *rear)
*front = *rear = -1 ;
}
}

void display (int *front , int *rear) {
if (*rear = = -1)
printf ("\n Queue is Empty ! !");
else {
```

```
int i;
printf ("Queue Contents : ");
for (i = *front ; i < = *rear ; i++) {
printf ("%d \t", queue [i]);
}
}
int main () {
int value , choice;
int front = -1, rear = -1;
while (1) {
printf ("\n 1. Insert to Queue ");
printf ("\n 2. Delete from Queue ");
printf ("\n 3. Display the contents ");
printf ("\n 4. Exit \n");
printf (" Enter your Option : ");
Scanf ("%d , & choice);
switch (choice) {
case 1 : printf ("Enter the element = \n");
         Scanf ("%d", & value);
         enqueue (value, &front , &rear );
         break;
case 2 : dequeue (&front , &rear);
        break;
Case 3 : display ( &front, & rear);
        break;
Case 4 : return 0;
default : printf (" You have exited the code !! ");
}
}
return 0;
}
```