//Program to implement Queue using linked list

#include<stdio.h>

#include<malloc.h>

#include<stdlib.h>

struct node {

        int info;

        struct node \* link;

}\*front=NULL,\*rear=NULL,\*ptr;

void AddQ(int uinfo)

{

  //read info from user and store

  struct node\* rear = (struct node\*) malloc(sizeof(struct node));

  rear->info = uinfo;

  rear->link = NULL;

  if(front==NULL)

  { front = rear;

    ptr = rear;

  }

  else

  {

    ptr->link = rear;

    ptr=rear; //moves to next node

  }

}

void DelQ()

{

  if(front==NULL)

  { printf("Underflow No element Present inside Linked List\n");

    return;

  }

  else

  {

    printf("Element Deleting\n");

    ptr=front;

    int dinfo = ptr->info;

    front = ptr->link;

    ptr->link = NULL;

    free(ptr);

    printf("Element %d has been deleted\n",dinfo);

  }

}

void DisplayQ()

{

  if(front == NULL)

  {

    printf("Underflow\n");

    return;

  }

  else

  { printf("The Queue Elements Are :\n");

    struct node \*ptr = (struct node\*) malloc(sizeof(struct node));

    ptr = front;

    while(ptr!=NULL)

    {

      printf("%d\t",ptr->info);

      ptr=ptr->link;

    }

    printf("\n");

  }

}

void main()

{

  int choice,uinfo;

  while(1)

  {

    printf("Enter A Choice: 1. Insert To Queue , 2. Delete From Queue , 3. Display Queue , 4.Exit\n");

    scanf("%d",&choice);

    switch(choice)

    {

      case 1 : printf("Enter the Element to be Inserted to Queue\n");

           scanf("%d",&uinfo);

           AddQ(uinfo);

           break;

      case 2 : DelQ();

           break;

      case 3 : DisplayQ();

           break;

      case 4 : exit(0);

      default : printf("Invalid Choice , Try Again\n");

           break;

    }

  }

}

**Output :**

