1.write a c program to implement simple queue using SLL.

**Code:**

#include <stdio.h>

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#include <stdlib.h>

struct QNode {

int key;

struct QNode\* next;

};

struct Queue {

struct QNode \*front, \*rear;

};

struct QNode\* newNode(int k)

{

struct QNode\* temp = (struct QNode\*)malloc(sizeof(struct QNode));

temp->key = k;

temp->next = NULL;

return temp;

}

struct Queue\* createQueue()

{

struct Queue\* q = (struct Queue\*)malloc(sizeof(struct Queue));

q->front = q->rear = NULL;

return q;

}

void enQueue(struct Queue\* q, int k)

{

struct QNode\* temp = newNode(k);

if (q->rear == NULL) {

q->front = q->rear = temp;

return;

}

q->rear->next = temp;

q->rear = temp;

}

void deQueue(struct Queue\* q)

{

if (q->front == NULL)

return;

struct QNode\* temp = q->front;

q->front = q->front->next;

if (q->front == NULL)

q->rear = NULL;

free(temp);

} int main()

{

struct Queue\* q = createQueue();

enQueue(q, 10);

enQueue(q, 20);

deQueue(q);

deQueue(q);

enQueue(q, 30);

enQueue(q, 40);

enQueue(q, 50);

deQueue(q);

printf("Queue Front : %d \n", q->front->key);

printf("Queue Rear : %d", q->rear->key);

return 0;

}

**Output:**

