**HÀNG ĐỢI**

**//Queue - cac phep toan co ban**

#include<stdio.h>

#include<malloc.h>

typedef int ElementType;

struct Node {

ElementType data;

struct Node \*next;

};

typedef struct {

struct Node\* front;

struct Node\* rear;

int size;

} Queue;

void makenull(Queue \*Q) {

struct Node\* Header = (struct Node\*)malloc(sizeof(struct Node));

Header->next= NULL;

Q->front=Header;

Q->rear=Header;

Q->size=0;

}

int is\_empty(Queue Q) {

return Q.front==Q.rear;

}

void en\_queue(ElementType x, Queue \*pQ) {

struct Node\* N=(struct Node\*)malloc(sizeof(struct Node));

N->data=x;

N->next=NULL;

pQ->rear->next=N;

pQ->rear=N;

pQ->size++;

}

ElementType front(Queue Q) {

return Q.front->next->data;

}

ElementType de\_queue(Queue \*pQ) {

ElementType x=pQ->front->next->data;

struct Node\* temp=pQ->front->next;

pQ->front->next=temp->next;

pQ->size--;

if(pQ->size==0) {

pQ->rear=pQ->front;

}

free(temp);

return x;

}

void print(Queue \*pQ) {

while(pQ->front->next!=NULL) {

printf("%d ", pQ->front->next->data);

de\_queue(pQ);

}

}

int main()

{

Queue Q;

ElementType x;

makenull(&Q);

en\_queue(10, &Q);

en\_queue(20, &Q);

x = de\_queue(&Q);

printf("%d %d\n", x, Q.size);

// tu them tap test vao day theo y muon

return 0;

}