문제해결기법(13967005)

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소프트웨어

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Q1. Lab 2 Queue (p. 55)

#define \_CRT\_SECURE\_NO\_WARNINGS// or scanf\_s

#include <stdio.h>

#include <math.h>

#include <stdlib.h>

#include <string.h>

#include <time.h>

#include <ctype.h>

#include <stdbool.h>

struct QUEUE {

int \*buf;

int size;

int front;

int back;

}Queue;//global variable

bool Queue\_full();

bool Queue\_empty();

void create\_Queue(const int size)

{

Queue.buf = (int\*)malloc(size \* sizeof(int));

Queue.size = size;

Queue.front = -1;

Queue.back = -1;

}

void release\_Queue()

{

free(Queue.buf);

Queue.size = 0;

Queue.front = -1;

Queue.back = -1;

}

void enqueue(const int val) {

if (Queue\_full())

{

printf("enqueue() : Queue is full!\n");

return;

}

if (Queue.back==-1)

{

Queue.front++;

}

Queue.back++;

Queue.buf[Queue.back] = val;

printf("enqueue[%d] : %d\n", Queue.back,val);

}

int dequeue() {

if (Queue\_empty())

{

printf("dequeue() : Queue is empty!!\n");

}

int val = Queue.buf[Queue.front];

printf("dequeue[%d] : %d\n", Queue.front, val);

Queue.front++;

return val;

}

bool Queue\_full() {

return Queue.back >= Queue.size - 1;

}

bool Queue\_empty() {

return Queue.front> Queue.back;

}

int main()

{

create\_Queue(10);

int val = 10;

while (!Queue\_full())

{

enqueue(val);

val += 10;

}

while (!Queue\_empty())

{

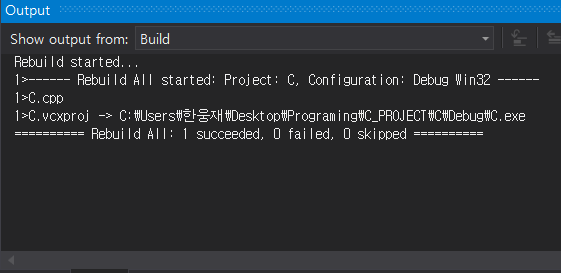
val = dequeue();

}

release\_Queue();

return 0;

}

텍스트이(가) 표시된 사진

자동 생성된 설명