栈

#include<iostream>

using namespace std;

const int MAX=20;

class statck {

public:

statck();

void push();

int pop();

int isempty();

int isfull();

private:

int top;

int base;

int data[MAX];

};

statck::statck() {

this->top = this->base = 0;

}

int statck::isempty() {

if (this->base == this->top) return 0;

else return 1;

}

int statck::isfull() {

if (this->top - this->base >= MAX - 1) return 0;

else return 1;

}

void statck::push() {

cout << "请输入数字" << endl;

int number;

cin >> number;

if (this->isfull() == 1) {

this->data[this->top++] = number;

cout << this->top;

}

else cout << "栈已满" << endl;

}

int statck::pop() {

if (this->isempty() == 1) {

return this->data[--this->top];

}

else {

cout << "栈空" << endl;

return -1;

}

}

void menu() {

cout << "1.入栈" << endl;

cout << "2.出栈" << endl;

cout << "0.退出" << endl;

}

int main() {

statck \*sta = new statck();

int choice, number;

menu();

while (1)

{

cout << "请输入操作" << endl;

cin >> choice;

switch (choice)

{

case 1:

sta->push();

break;

case 2:

number=sta->pop();

cout << number;

break;

case 0:

exit(0);

default:

break;

}

}

system("pause");

return 0;

}

队列

#include<iostream>

using namespace std;

class dui {

public:

dui();

int data;

dui\* next;

};

dui::dui() {

this->next = NULL;

}

class queue {

public:

queue();

void push();

int pop();

private:

dui \*d;

dui\* front;

dui\* rear;

};

queue::queue() {

this->front = new dui();

this->rear = new dui();

this->front = this->rear;

}

void queue::push() {

cout << "请输入测试数字" << endl;

int num;

cin >> num;

dui\* du = new dui();

du->data = num;

this->rear->next = du;

this->rear = du;

}

int queue::pop() {

if (this->front == this->rear) return 0;

dui\* temp;

temp = this->front->next;

int e = temp->data;

this->front->next = temp->next;

if (temp == this->rear) this->rear = this->front;

delete temp;

return e;

}

void menu() {

cout << "1.入队操作" << endl;

cout << "2.出队操作" << endl;

}

int main()

{

queue \*que = new queue();

int choice;

menu();

while (1)

{

cout << "请输入操作序号" << endl;

cin >> choice;

switch (choice)

{

case 1:

que->push();

break;

case 2:

cout << que->pop()<<endl;

break;

default:

break;

}

}

system("pause");

return 0;

}



