

数据结构教程第十二课实验二循环链表实验 PDF转换可能丢失图片或格式，建议阅读原文

https://www.100test.com/kao_ti2020/138/2021_2022__E6_95_B0_E6_8D_AE_E7_BB_93_E6_c98_138112.htm 本课主题：实验二循环链表实验

教学目的：掌握单向链表的实现方法
教学重点：单向链表的存储表示及操作
教学难点：单向链表的操作实现
授课内容：一、单向链表的存储表示C源程序

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#include#include#include#define ERROR 0#define OK 1#define EQUAL 1#define OVERFLOW -1#define LIST_INIT_SIZE 100#define LISTINCREMENT 10struct STU{ char name[20]. char stuno[10]. int age. int score.}stu[50].typedef struct STU ElemType.struct LNODE{ ElemType data. struct LNODE *next.}.typedef struct LNODE LNode.typedef struct LNODE *LinkList.int init(LinkList *L){ *L=(LNode *)malloc(sizeof(LNode)). if(!L) exit(ERROR). (*L)->next=NULL. return OK.}/*init */int ListLength(LinkList L){ int j=0. while (L->next) { L=L->next. j . } return j.}int GetElem(LinkList L,int i,ElemType *e){ LinkList p. int j. p=L->next.j=1. while(pamp.j p=p->next. j. } if(!p||j>1) return ERROR. *e=p->data. return OK.}int EqualList(ElemType *e1,ElemType *e2){ if (strcmp(e1->name,e2->name)==0) return 1. else return 0.}int Less_EqualList(ElemType *e1,ElemType *e2){ if (strcmp(e1->name,e2->name) return 1. else return 0.}int LocateElem(LinkList La,ElemType e,int type){ int i. LinkList p. p=La. switch (type) { case EQUAL: while(p->next) { p=p->next. if(EqualList(amp.e)) return 1. } return 0. break. default: break. }
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return 0.}void MergeList(LinkList La,LinkList Lb,LinkList *Lc){
LinkList pa,pb,pc. pa=La->next.pb=Lb->next. *Lc=pc=La.
while(pa amp. pb) { if(Less_EqualList(amp.pb->data)) {
pc->next=pa.pc=pa.pa=pa->next. } else {
pc->next=pb.pc=pb.pb=pb->next. } } pc->next=pa?pa:pb.
free(Lb).}int printlist(LinkList L){ int i. LinkList p. p=L.
printf("name stuno age score\n"). while(p->next) { p=p->next.
printf("%-10s %s\t%d\t%d\n", p->data.name, p->data.stuno,
p->data.age, p->data.score). } printf("\n").}int ListInsert(LinkList
L,int i,ElemType e){ LinkList p,s. int j. p=L.j=0. while(pamp.j {
p=p->next. j. } if(!p||j>i-1) return ERROR.
s=(LinkList)malloc(sizeof(LNode)). s->data=e. s->next=p->next.
p->next=s. return OK.}/*ListInsert Before i */main(){ struct STU e.
LinkList La,Lb,Lc. clrscr(). printf("\n\n-----List Demo
is running...-----\n\n"). printf("First is InsertList
function.\n"). init(&amp;La). 100Test 下载频道开通，各类考试
题目直接下载。详细请访问 www.100test.com

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