**Ex.3 pag 46 Gorgan Bogdan**

//creaza o lista unidirectionala

//Afiseaza lista

//Exclude candidatul ce isi retrage actele

//Include in lista un candidat nou

//Afiseaza peecrancandidatiicu media mai mare de 7.5

//Creaza o lista suplimentare cu candidatii cu media maimare ca 9

//Exclude candidatii cu media mai mica de 6.0

**program** PrelucrareLista;

**type** AdresaCandidat=^Candidat;

Candidat=**record**

Numeprenume :string;

notamedia:real;

Urm:AdresaCandidat;

**end**;

**var** i,n:integer;

nume:string;

media:real;

p,r,v,u:AdresaCandidat;

**procedure** creare(**var** p:AdresaCandidat);

**begin** write('Introdu elevul (Cand incheiati introduceti cuvantul (stop)) ');

readln(nume);

**while** nume <>'stop' **do**

**begin** write('introdu media elevului ',nume,' '); readln(media);

**new**(R);

r^.numeprenume:=nume;

r^.notamedia:=media;

r^.urm:=nil;

**if** P=nil **then** P:=R **else** v^.urm:=r;

V:=r;

write('Cheia de sfarsit e cuvantul stop '); readln(nume);

**end**;

**end**;

**procedure** exclud1;

**label** 1;

**var** q,r:AdresaCandidat;

cheie:string;

**begin**

write(' Dati elementul ce urmeaza');

writeln(' sa fie exclus');

readln(cheie);

r:=p;

q:=r;

**while** r<>nil **do**

**begin**

**if** r^.Numeprenume=cheie **then goto** 1;

q:=r;

r:=r^.urm;

**end**;

1:**if** r=nil **then** writeln('element inexistent')

**else begin**

**if** r=p **then** p:=r^.urm **else** q^.urm:=r^.urm;

dispose(r);

**end**;

**end**;

**procedure** include(**var** p:AdresaCandidat);

**begin**

writeln('Introduceti candidatul care depune actele');

readln(nume); readln(media);

**new**(R);

r^.numeprenume:=nume;

r^.notamedia:=media;

r^.urm:=p;

P:=R;

**end**;

**procedure** Nota;

**begin**

r:=p;

**while** r<>nil **do**

**begin**

**if**(r^.notamedia>7.5) **then**

**begin**

writeln(r^.Numeprenume,' ',r^.notamedia);

**end**;

r:=r^.urm

**end**;

**end**;

**procedure** cei\_cu\_9(**var** p,u:AdresaCandidat);

**var** q: AdresaCandidat;

**begin** u:=nil; r:=p;

**while** r<>nil **do**

**begin if** r^.notamedia>=9.0

**then begin**

**new**(q);

q^.numeprenume:=r^.numeprenume;

q^.notamedia:=r^.notamedia;

q^.urm:=nil;

**if** u=nil **then begin**

u:=q;

V:=q;

**end**

**else begin** v^.urm:=q;

v:=q;

**end**;

**end**;

r:=r^.urm;

**end**;

**end**;

**procedure** exclude(**var** p:AdresaCandidat;**var** ne:integer);

**begin**

ne:=0;

r:=p;

v:=r;

**while** r<>nil **do**

**begin if** r^.notamedia<6.0

**then if** P=r **then begin** P:=r^.urm; v:=p; dispose (r);r:=v; **end**

**else begin**

v^.urm:=r^.urm; dispose (r);r:=v^.urm;

**end**

**else begin**

ne:=ne+1; v:=r; r:=r^.urm;

**end**;

**end**;

**end**;

**procedure** afisare(u:AdresaCandidat);

**begin**

R:=u;

**while** R<>nil **do**

**begin** writeln(r^.numeprenume:20,r^.notamedia:7:2);

r:=r^.urm;

**end**;

**end**;

**begin**

p:=nil; creare(p);

writeln('Lista initiala ');

afisare(p);

include(p);

writeln('Lista cu cel inclus este');

afisare(p);

cei\_cu\_9(p,u);

writeln(' Lista celor cu 9');

afisare(u);

exclude(p,n);

writeln(' Lista dupa excludere este');

afisare(p);

writeln(' Lista elevilor cu nota mai mare ca 7.5 este');

nota;

exclud1;

writeln(' Lista finala este');

afisare(p);

**end**.

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//Concateaza doua liste unidirectionale

**program** PrelucrareLista;

**type**

AdresaCandidat = ^Candidat;

Candidat = **record**

Nume: string;

nota: real;

Urm: AdresaCandidat;

**end**;

**var**

n,i,n2,i2:integer;

p,p2,c,c2,v,u,u2: AdresaCandidat;

**procedure** citire;

**begin**

writeln('Dati numarul de elevi pentru lista'); readln(n);

**new**(c);

writeln('Introduceti numele si nota '); readln(c^.Nume); readln(c^.nota);

c^.urm := nil;

p:= c;

u:= c;

**for var** i:=2 **to** n **do**

**begin**

**new**(c);

writeln('Introduceti numele si nota '); readln(c^.Nume); readln(c^.nota);

c^.urm:=nil;

u^.urm:=c;

u:=c;

**end**;

**end**;

**procedure** citireII;

**begin**

write('Dati numarul de elevi pentru a doua lista '); readln(n2);

**new**(c2);

writeln('Introduceti numele si nota');

readln(c2^.Nume); readln(c2^.nota);

c2^.urm := nil;

p2:=c2;

u2:=c2;

**for var** i2:=2 **to** n2 **do**

**begin**

**new**(c);

writeln('Introduceti numele si nota'); readln(c2^.Nume); readln(c2^.nota);

c2^.urm:=nil;

u2^.urm:=c2;

u2:=c2;

**end**;

**end**;

**procedure** afisare;

**begin**

c:=p;

**while** c <> nil **do**

**begin**

writeln(c^.Nume, ' ', c^.Nota, ' ');

c:=c^.urm;

**end**;

**end**;

**procedure** afisareII;

**begin**

c2:=p2;

**while** c2 <> nil **do**

**begin**

writeln(c2^.Nume, ' ', c2^.Nota, ' ');

c2 := c2^.urm;

**end**;

**end**;

**procedure** concat;

**begin**

c:=p;

**while** c<>nil **do**

**begin**

c^.nume:=c2^.nume;

c^.nota:=c2^.nota;

writeln(c^.Nume,' ',c^.Nota);

**end**;

c:=c^.urm

**end**;

**begin**

citire;

citireII;

writeln('Afisare lista 1');

afisare;

writeln('Afisare lista 2');

afisareII;

writeln('Lista concatata este:');

concat;

**end**.

----------------------------------------------------------------------------

//descompune o lista in doua liste

**program** PrelucrareLista;

**type** AdresaCandidat=^Candidat;

Candidat=**record**

Nume:string;

nota:real;

Urm :AdresaCandidat;

**end**;

**var** n,i:integer;

p,c,v,u : AdresaCandidat;

**procedure** citire;

**var** i:integer;

**begin**

write('Dati numarul de elevi pentru lista'); readln(n);

**new**(c);

writeln('Introduceti numele si nota');

readln(c^.nume); readln(c^.nota);

c^.urm:=nil;

p:=c;

u:=c;

**for** i:=2 **to** n **do begin**

**new**(c);

writeln('Introduceti numele si nota');

readln(c^.nume); readln(c^.nota);

c^.urm:=nil;

u^.urm:=c;

u:=c;

**end**;

**end**;

**procedure** criteriupozitiv(**var** p,u:AdresaCandidat);

**var** q: AdresaCandidat;

**begin**

u:=nil;

c:=p;

**while** c<>nil **do**

**begin if** c^.nota>=5.0

**then begin**

**new**(q);

q^.nume:=c^.nume;

q^.nota:=c^.nota;

q^.urm:=nil;

**if** u=nil **then begin**

u:=q; v:=q; **end**

**else begin**

v^.urm:=q; v:=q;

**end**;

writeln(c^.Nume,' ',c^.Nota);

**end**;

c:=c^.urm;

**end**;

**end**;

**procedure** criteriunegativ(**var** p,u:AdresaCandidat);

**var** q: AdresaCandidat;

**begin**

u:=nil;

c:=p;

**while** c<>nil **do**

**begin if** c^.nota<=5.0

**then begin**

**new**(q);

q^.nume:=c^.nume;

q^.nota:=c^.nota;

q^.urm:=nil;

**if** u=nil **then begin**

u:=q; v:=q; **end**

**else begin**

v^.urm:=q; v:=q;

**end**;

writeln(c^.Nume,' ',c^.Nota);

**end**;

c:=c^.urm;

**end**;

**end**;

**procedure** afisare;

**begin**

c:=p;

**while** c<>nil **do begin**

writeln(c^.nume,' ',c^.nota,' ');

c:=c^.urm;

**end**;

**end**;

**begin**

citire;

writeln('Lista initiala este: ');

afisare;

writeln('Lista elevilor cu note pozitive este:');

criteriupozitiv(p,u);

writeln('Lista elevilor cu note negative este:');

criteriunegativ(p,u);

**end**.

//selecteazaelemente care corespund unui anumit criteriu

//criteriul este (introducerea notei minime de la tastatura)

**program** PrelucrareLista;

**type** AdresaCandidat=^Candidat;

Candidat=**record**

Nume:string;

Nota:real;

Urm:AdresaCandidat;

**end**;

**var** n,w:integer;

p,c,v,u : AdresaCandidat;

**procedure** citire;

**begin**

write('Dati numarul de elevi pentru lista ');

readln(n);

**new**(c);

writeln('');

readln(c^.nume); readln(c^.nota);

c^.urm:=nil;

p:=c;

u:=c;

**for var** i:=2 **to** n **do**

**begin**

**new**(c);

writeln('Introduceti numele si nota');

readln(c^.nume); readln(c^.nota);

c^.urm:=nil;

u^.urm:=c;

u:=c;

**end**;

**end**;

**procedure** afisare;

**begin**

c:=p ;

**while** c<>nil **do begin**

writeln(c^.nume,' ', c^.nota, ' ');

c:=c^.urm;

**end**;

**end**;

**procedure** nota(**var** p,u:AdresaCandidat);

**var** q: AdresaCandidat;

**begin** u:=nil; c:=p;

**while** c<>nil **do**

**begin**

**if** c^.nota>=w **then begin**

**new**(q);

q^.nume:=c^.nume;

q^.nota:=c^.nota;

q^.urm:=c;

**if** u=nil **then begin**

u:=q;

v:=q;

**end**

**else begin**

v^.urm:=q;

v:=q; **end**;

writeln(c^.Nume,' ',c^.Nota,' ');

**end**;

c:=c^.urm;

**end**;

**end**;

**begin**

writeln('Introduceti valoarea notei minime');

readln(w);

citire;

writeln('Lista initiala este: ');

afisare;

writeln('Candidatii selectati sunt: ');

Nota(p,u);

**end**.