

Окружно такмичење из програмирања за ученике основних школа

17. април 2011

II категорија (7. и 8. разред)

Програмски језик PASCAL

1. UCIONICE

```
Program UCIONICE;
Var u1,u2,u3,t,m:integer;
Begin
    readln(u1,u2,u3);
    readln(t);
    if u1<u2 then begin
        m:=u1; u1:=u2; u2:=m
    end;
    if u1<u3 then begin
        m:=u1; u1:=u3; u3:=m
    end;
    if u2<u3 then begin
        m:=u2; u2:=u3; u3:=m
    end;
    if t<=u1 then writeln(1)
    else if t<=u1+u2 then writeln(2)
    else if t<=u1+u2+u3 then writeln(3)
    else writeln('NEDOVOLJNO MESTA')
End.
```

2. GRUPEA

```
Program GRUPEA;
Var n,i,k,a,x,s:integer;
Begin
    readln(a);
    readln(n);
    k:=0; s:=0;
    i:=1;
    while ((i<=n) and (s<a)) do begin
        readln(x);
        if s+x<=a then begin
            s:=s+x;
            k:=k+1;
        end;
        i:=i+1
    end;
    if k<n then writeln(k)
    else writeln('SVE')
End.
```

3. LISTE

```
Program LISTE;
Var p:array[1..100] of integer;
    i,j,t,n,k,k1,k2,g:integer;
Begin
    readln(k);
    readln(n);
    for i:=1 to n do readln(p[i]);
    for i:=1 to n-1 do
        for j:=i+1 to n do
            if p[i]<p[j] then begin
                t:=p[i];
                p[i]:=p[j];
                p[j]:=t
            end;
        if n<=k then g:=p[n]
        else if p[k]<>p[k+1] then g:=p[k]
        else begin
            k1:=k-1;
            while (k1<>0) and (p[k1]=p[k]) do k1:=k1-1;
            k2:=k;
            while (k2<n) and (p[k]=p[k2+1]) do k2:=k2+1;
            if (k-k1<k2-k) and (k1<>0) then g:=p[k1]
            else if k2<=k*1.25 then g:=p[k2]
            else if k1<>0 then g:=p[k1]
            else g:=101
        end;
    writeln(g)
End.
```

Програмски језик BASIC

1. UCIONICE

```
REM UCIONICE
CLS
INPUT U1
INPUT U2
INPUT U3
INPUT T
IF U1 < U2 THEN
    M = U1 : U1 = U2 : U2 = M
END IF
IF U1 < U3 THEN
    M = U1 : U1 = U3 : U3 = M
END IF
IF U2 < U3 THEN
    M = U2 : U2 = U3 : U3 = M
END IF
IF T <= U1 THEN
    PRINT 1
ELSEIF T <= U1 + U2 THEN
    PRINT 2
ELSEIF T <= U1 + U2 + U3 THEN
    PRINT 3
ELSE
    PRINT "NEDOVOLJNO MESTA"
END IF
END
```

2. GRUPEA

```
REM GRUPEN
CLS
INPUT A
INPUT N
K = 0 : S = 0
I = 1
WHILE I <= N AND S < A
    INPUT X
    IF S + X <= A THEN
        S = S + X
        K = K + 1
    END IF
    I = I + 1
WEND
IF K < N THEN PRINT K ELSE PRINT "SVE"
END
```

```

3. LISTE
REM LISTE
CLS
DIM P(100)
INPUT K
INPUT N
FOR I = 1 TO N
    INPUT P(I)
NEXT I
FOR I = 1 TO N - 1
    FOR J = I + 1 TO N
        IF P(I) < P(J) THEN
            T = P(I) : P(I) = P(J) : P(J) = T
        END IF
    NEXT J
NEXT I
IF N <= K THEN
    G = P(N)
ELSEIF P(K) <> P(K+1) THEN
    G = P(K)
ELSE
    K1 = K - 1
    WHILE K1 <> 0 AND P(K1) = P(K)
        K1 = K1 - 1
    WEND
    K2 = K
    WHILE K2 < N AND P(K) = P(K2 + 1)
        K2 = K2 + 1
    WEND
    IF K - K1 < K2 - K AND K1 <> 0 THEN
        G = P(K1)
    ELSEIF K2 <= K * 1.25 THEN
        G = P(K2)
    ELSEIF K1 <> 0 THEN
        G = P(K1)
    ELSE
        G = 101
    END IF
END IF
PRINT G
END

```

Програмски језик C++

1. UCIONICE

```
// Ucionice
#include <iostream>
int main(){
    int u1,u2,u3,t,m;
    cin >> u1 >> u2 >> u3;
    cin >> t;
    if (u1<u2) {
        m=u1; u1=u2; u2=m;
    }
    if (u1<u3) {
        m=u1; u1=u3; u3=m;
    }
    if (u2<u3) {
        m=u2; u2=u3; u3=m;
    }
    if (t<=u1) cout << 1;
    else if (t<=u1+u2) cout << 2;
    else if (t<=u1+u2+u3) cout << 3;
    else cout << "NEDOVOLJNO MESTA";
}
```

2. GRUPEA

```
// Grupea
#include <iostream>
int main(){
    int n,i,k,a,x,s;
    cin >> a >> n;
    k=0; s=0;
    i=1;
    while ((i<=n) && (s<a)){
        cin >> x;
        if (s+x<=a) {
            s=s+x;
            k++;
        }
        i++;
    }
    if (k<n) cout << k;
    else cout << "SVE";
}
```

3. LISTE

```
// Liste
#include <iostream>
int main(){
    int i,j,t,n,k,k1,k2,g,p[100];
    cin >> k >> n;
    for (i=0;i<n;i++) cin >> p[i];
    for (i=0;i<n-1;i++)
        for (j=i+1;j<n;j++)
            if (p[i]<p[j]) {
                t=p[i]; p[i]=p[j]; p[j]=t;
            }
    if (n<=k) g=p[n-1];
    else if (p[k-1]!=p[k]) g=p[k-1];
    else {
        k1=k-2;
        while ((k1!=-1) && (p[k1]==p[k-1])) k1--;
        k2=k-1;
        while ((k2<n-1) && (p[k-1]==p[k2+1])) k2++;
        if ((k-1-k1<k2-k-1) && (k1!=-1)) g=p[k1];
        else if (k2<=(k-1)*1.25) g=p[k2];
        else if (k1!=-1) g=p[k1];
        else g=101;
    }
    cout << g;
}
```