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1  #include <stdio.h>
2  #include <stdlib.h>
3
4  #define megisto_plithos 100
5
6  typedef enum {
7      FALSE, TRUE
8  } boolean;
9
10 typedef boolean typos_synolou[megisto_plithos];
11 typedef int stoixeio_synolou;
12
13 void Dimiourgia(typos_synolou synolo);
14 void Katholiko(typos_synolou synolo);
15 void Eisagogi(stoixeio_synolou stoixeio, typos_synolou synolo);
16 void Diagrafi(stoixeio_synolou stoixeio, typos_synolou synolo);
17 boolean Melos(stoixeio_synolou stoixeio, typos_synolou synolo);
18 boolean KenoSynolo(typos_synolou synolo);
19 boolean IsaSynola(typos_synolou s1, typos_synolou s2);
20 boolean Yposynolo(typos_synolou s1, typos_synolou s2);
21 void EnosiSynolou(typos_synolou s1, typos_synolou s2, typos_synolou enosi);
22 void TomiSynolou(typos_synolou s1, typos_synolou s2, typos_synolou tomi);
23 void DiaforaSynolou(typos_synolou s1, typos_synolou s2, typos_synolou diafora);
24 boolean isPrime(stoixeio_synolou n);
25 void createPrimeSet(stoixeio_synolou first, stoixeio_synolou last, typos_synolou syn);
26 void displaySet(stoixeio_synolou first, stoixeio_synolou last, typos_synolou syn);
27
28 int main()
29 {
30     typos_synolou syn;
31     int first, last;
32
33     printf("dwse ton first:");
34     scanf("%d", &first);
35
36     printf("dwse ton last");
37     scanf("%d", &last);
38
39     createPrimeSet(first, last, syn);
40
41     printf("prwtoi..... \n");
42     displaySet(first, last, syn);
43
44 }
45 void Dimiourgia(typos_synolou synolo)
46 {
47     stoixeio_synolou i;
48
49     for (i = 0; i < megisto_plithos; i++)
50         synolo[i] = FALSE;
51 }
52 void Katholiko(typos_synolou synolo)
53 {
54     stoixeio_synolou i;
55
56     for (i = 0; i < megisto_plithos; i++)
57         synolo[i] = TRUE;
58 }
59 void Eisagogi(stoixeio_synolou stoixeio, typos_synolou synolo)
60 {
61     synolo[stoixeio] = TRUE;
62 }
63 void Diagrafi(stoixeio_synolou stoixeio, typos_synolou synolo)
64 {
65     synolo[stoixeio] = FALSE;
66 }

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67 boolean Melos(stoixeio_synolou stoixeio, typos_synolou synolo)
68 {
69     return synolo[stoixeio];
70 }
71 boolean KenoSynolo(typos_synolou synolo)
72 {
73     stoixeio_synolou i;
74     boolean keno;
75
76     keno=TRUE;
77     i = 0;
78
79     while (i < megisto_plithos && keno) {
80         if (Melos(i, synolo))
81             keno = FALSE;
82         else
83             i++;
84     }
85     return keno;
86 }
87 boolean IsaSynola(typos_synolou s1, typos_synolou s2)
88 {
89     stoixeio_synolou i;
90     boolean isa;
91
92     isa = TRUE;
93     i=0;
94     while (i < megisto_plithos && isa)
95         if (Melos(i,s1) != Melos(i,s2))
96             isa = FALSE;
97         else
98             i++;
99     return isa;
100 }
101 boolean Yposynolo(typos_synolou s1, typos_synolou s2)
102 {
103     stoixeio_synolou i;
104     boolean yposyn;
105
106     yposyn = TRUE;
107     i=0;
108     while (i < megisto_plithos && yposyn)
109         if (Melos(i, s1) && !Melos(i, s2))
110             yposyn = FALSE;
111         else
112             i++;
113     return yposyn;
114 }
115 void EnosiSynolou(typos_synolou s1, typos_synolou s2, typos_synolou enosi)
116 {
117     stoixeio_synolou i;
118
119     for (i = 0; i < megisto_plithos; i++)
120         enosi[i] = Melos(i, s1) || Melos(i, s2);
121 }
122 void TomiSynolou(typos_synolou s1, typos_synolou s2, typos_synolou tomi)
123 {
124     stoixeio_synolou i;
125
126     for (i = 0; i < megisto_plithos; i++)
127         tomi[i] = Melos(i, s1) && Melos(i, s2);
128 }
129 void DiaforaSynolou(typos_synolou s1, typos_synolou s2, typos_synolou diafora)
130 {
131     stoixeio_synolou i;
132

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133     for (i = 0; i < megisto_plithos; i++)
134         diafora[i] = Melos(i, s1) && (!Melos(i, s2));
135 }
136 boolean isPrime(int n)
137 {
138     int i,dier=0;
139
140     for(i=1;i<=n;i++)
141         if(n % i == 0)
142             dier++;
143
144     if(dier==2)
145         return TRUE;
146     else
147         return FALSE;
148 }
149 void createPrimeSet(stoixeio_synolou first,stoixeio_synolou last,typos_synolou syn)
150 {
151     Dimiourgia(syn);
152
153     for(int i = first; i <= last; i++)
154         if(isPrime(i))
155             Eisagogi(i,syn);
156 }
157 void displaySet(stoixeio_synolou first,stoixeio_synolou last,typos_synolou syn)
158 {
159     for(int i=first; i <= last; i++)
160         if(syn[i])
161             printf("%d ",i);
162 }
163
164

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