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1 // Program 1
2 #include <stdio.h>
3 #include <stdlib.h>
4
5 int main(void)
6 {
7     int i;
8     for(i = 0; i < 10; ++i)
9     {
10         printf("i = %d\n", i);
11         if(i % 2 == 0)
12             continue;
13         printf("i^2 = %d\n", i * i);
14     }
15     exit(0);
16 }
17
18 // Program 2
19 #include <stdio.h>
20 #include <stdlib.h>
21
22 int main(void)
23 {
24     int i;
25     for(i = -16; i < 16; ++i)
26     {
27         if(i % 4 == 0)
28             continue;
29         printf("i = %d\n", i);
30     }
31     exit(0);
32 }
33
34 // Program 3
35 #include <stdio.h>
36 #include <stdlib.h>
37
38 int main(void)
39 {
40     int i;
41     i = 0;
42     while(i < 10)
43     {
44         if(i % 2 == 0)
45         {
46             continue;
47         }
48         printf("i = %d\n", i);
49         i += 1;
50     }
51
52     exit(0);
53 }
54
55 // Program 4
56 #include <stdio.h>
57 #include <stdlib.h>
58
59 int main(void)
60 {
61     int i;
62     i = 0;
63     while(i < 10)
64     {
65         if(i%2 == 0)
66         {
67             i += 1;
68             continue;
69         }

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70         printf("i = %d\n", i);
71         i += 1;
72     }
73     exit(0);
74 }
75
76 // Program 5
77 #include <stdio.h>
78 #include <stdlib.h>
79
80 int main(void)
81 {
82     int i;
83     for(i = 0; i < 8; ++i)
84     {
85         if(i % 2 == 0)
86             continue;
87         else if(i % 4 == 0)
88             break;
89         else
90             printf("i = %d\n", i);
91     }
92     exit(0);
93 }
94
95 // Program 6
96 #include <stdio.h>
97 #include <stdlib.h>
98
99 int main(void)
100 {
101     int i;
102     for(i = 0; i < 20; ++i)
103     {
104         if((i * i) > 50)
105             break;
106         else
107             printf("i = %d\n", i);
108     }
109     exit(0);
110 }
111
112 // Program 7
113 #include <stdio.h>
114 #include <stdlib.h>
115
116 int main(void)
117 {
118     int i;
119     int k;
120     int flag;
121     for(i = 1; i < 20; ++i)
122     {
123         if(i == 1 && i == 2)
124             continue;
125         flag = 0;
126         for(k = 2; k < i; ++k)
127         {
128             if(i % k == 0)
129             {
130                 flag = 1;
131                 break;
132             }
133             // If break or continue appear in nested loop then
134             // their effect is applicable only to the inner most loop
135             // of which they are part.
136             // e.g. This break will break out of inner loop for(k=2; k
137             // < i; ++k)
138             // but will not break from the outer loop for(i = 0; i <
139             // 20; ++i)
140             // Same comments can be extended for the continue statement

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137         }
138     }
139
140     if(flag == 1)
141         printf("i = %d\n", i) ;
142     else
143         continue;
144 }
145 exit(0);
146 }
147
148 // Program 8
149 #include <stdio.h>
150 #include <stdlib.h>
151
152 int main(void)
153 {
154     int i, j;
155     for(i = 0; i < 5; ++i)
156         for(j = 0; j < 5; ++j)
157             if(i > j)
158                 continue;
159             else
160                 printf("i=%d is less than or equal to j=%d\n", i, j);
161     exit(0);
162 }
163
164 // Program 9
165 #include <stdio.h>
166 #include <stdlib.h>
167
168 int main(void)
169 {
170     int i, j;
171     for(i = 0; i < 10; ++i)
172     {
173         if(i % 2 == 1)
174             continue;
175         for(j = 0; j < 10; ++j)
176         {
177             if(j % 2 == 0)
178                 continue;
179             printf("i=%d, j=%d\n", i, j);
180         }
181     }
182     exit(0);
183 }
184
185 // Program 10
186 #include <stdio.h>
187 #include <stdlib.h>
188
189 int main(void)
190 {
191     int i, j, k;
192     int flag1, flag2;
193
194     for(i = 1; i <= 10; ++i)
195     {
196         flag1 = 1;
197         for(k = 2; k < i; ++k)
198             if(i % k == 0)
199                 flag1 = 0;
200
201         if(flag1 == 1)
202         {
203             for(j = 1; j <= 10; ++j)
204             {
205                 flag2 = 1;

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206         for(k=2; k < j; ++j)
207             if(j % k == 0)
208                 {
209                     flag2 = 0;
210                     break;
211                 }
212         if(flag2 == 0)
213             printf("Prime (i=%d), Composite (j=%d)\n", i, j);
214     }
215 }
216 }
217 exit(0);
218 }
```