

TUGAS AKHIR SEMESTER
MATAKULIAH LOGIKA INFORMATIKA
-- SEVEN SEGMENT --

Dosen Pengajar : Dr. Gede Suhartana, S.Kom., M.Kom.



Oleh:

Nama : Muhammad Firryanul Rizky

NIM : 1708561006

Kelas : A

PROGRAM STUDI TEKNIK INFORMATIKA
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM
UNIVERSITAS UDAYANA

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Tabel Pengaktifan Seven Segment

ANGKA	h	g	f	e	d	c	b	a
0	0	0	1	1	1	1	1	1
1	0	0	0	0	0	1	1	0
2	0	1	0	1	1	0	1	1
3	0	1	0	0	1	1	1	1
4	0	1	1	0	0	1	1	0
5	0	1	1	0	1	1	0	1
6	0	1	1	1	1	1	0	1
7	0	0	0	0	0	1	1	1
8	0	1	1	1	1	1	1	1
9	0	1	1	0	1	1	1	1

Catatan :

1 = ON (High)

0 = OFF (Low)

Kode Program dalam Bahasa C

```
1  #include <stdio.h>
2  #define MAX_DIGITS 10
3
4  //Program Seven Segment menggunakan fungsi define MAX_DIGITS 10
5  int clear_digits_array(void);
6  int process_digit(int digit, int position);
7  int print_digits_array(void);
8  char digits[3][MAX_DIGITS*4];
9  const int array[MAX_DIGITS][7]={1,1,1,0,1,1,1},{0,0,1,0,0,1,0},{1,0,1,1,1,0,1},{1,0,1,1,0,1,1},{0,1,1,1,0,
1,0},{1,1,0,1,0,1,1},{1,1,0,1,1,1,1},{1,0,1,0,0,1,0},{1,1,1,1,1,1,1},{1,1,1,1,0,1,1},};
10
11 int clear_digits_array(void){
12     int j=0,i=0;
13     for(i=0;i<3;i++){
14         for(j=0;j<MAX_DIGITS*4;j++){
15             digits[i][j]=' ';
16         }
17     }
18 }
19
20 int process_digit(int digit, int position){
21     int i=0;
```

```

22     for(i=0;i<7;i++){
23         if(array[digit][i]==1){
24             switch(i){
25                 case 0: digits[0][1+position*4]='_';
26                     break;
27                 case 1: digits[1][0+position*4]='|';
28                     break;
29                 case 2: digits[1][2+position*4]='|';
30                     break;
31                 case 3: digits[1][1+position*4]='_';
32                     break;
33                 case 4: digits[2][0+position*4]='|';
34                     break;
35                 case 5: digits[2][2+position*4]='|';
36                     break;
37                 case 6: digits[2][1+position*4]='_';
38                     break;
39             }
40         }
41     }
42 }
43 }
44
45 int print_digits_array(void){
46     int a=0,b=0;
47     for(a=0;a<3;a++){
48         for(b=0;b<MAX_DIGITS*4;b++){
49             printf("%c",digits[a][b]);
50             printf("\n");
51         }
52         printf("\n");
53     }
54 int main(void) {
55     char character_number='\0';
56     int a=0;
57
58     clear_digits_array();
59     printf("          =====\n");
60     printf("          TUGAS AKHIR SEMESTER LOGIKA INFORMATIKA\n\n");
61     printf("          -- SEVEN SEGMENTS --          \n\n");
62     printf("          Menggunakan Metode Define MAX_DIGITS 10\n");
63     printf("          =====\n\n");
64     printf("                      Oleh          \n");
65     printf("                      Muhammad Firyanul Rizky          \n");

```

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66     printf("                                1708561006          \n\n");
67     printf("                                =====\n");
68     printf("                                Masukkan angka : ");
69     while ((character_number=getchar())!='\n') {
70         int number=MAX_DIGITS;
71         switch(character_number){
72             case '0': number=0;
73                 printf("\n");
74                 printf("L1 = (1) On\n");
75                 printf("L2 = (1) On\n");
76                 printf("L3 = (1) On\n");
77                 printf("L4 = (0) Off\n");
78                 printf("L5 = (1) On\n");
79                 printf("L6 = (1) On\n");
80                 printf("L7 = (1) On\n");
81                 printf("\n");
82             break;
83             case '1': number=1;
84                 printf("\n");
85                 printf("L1 = (0) Off\n");
86                 printf("L2 = (0) Off\n");
87                 printf("L3 = (1) On\n");
88                 printf("L4 = (0) Off\n");
89                 printf("L5 = (0) Off\n");
90                 printf("L6 = (1) On\n");
91                 printf("L7 = (0) Off\n");
92                 printf("\n");
93             break;
94             case '2': number=2;
95                 printf("\n");
96                 printf("L1 = (1) On\n");
97                 printf("L2 = (0) Off\n");
98                 printf("L3 = (1) On\n");
99                 printf("L4 = (1) On\n");
100                printf("L5 = (1) On\n");
101                printf("L6 = (0) Off\n");
102                printf("L7 = (1) On\n");
103                printf("\n");
104            break;
105            case '3': number=3;
106                printf("\n");
107                printf("L1 = (1) On\n");
108                printf("L2 = (0) Off\n");
109                printf("L3 = (1) On\n");
110                printf("L4 = (1) On\n");
111                printf("L5 = (0) Off\n");
112                printf("L6 = (1) On\n");
113                printf("L7 = (1) On\n");
114                printf("\n");
115            break;
116            case '4': number=4;
117                printf("\n");
118                printf("L1 = (0) Off\n");
119                printf("L2 = (1) On\n");
120                printf("L3 = (1) On\n");
121                printf("L4 = (1) On\n");
122                printf("L5 = (0) Off\n");
123                printf("L6 = (1) On\n");
124                printf("L7 = (0) Off\n");
125                printf("\n");
126            break;
127            case '5': number=5;
128                printf("\n");
129                printf("L1 = (1) On\n");
130                printf("L2 = (1) On\n");
131                printf("L3 = (0) Off\n");

```

```

132         printf("L4 = (1) On\n");
133         printf("L5 = (0) Off\n");
134         printf("L6 = (1) On\n");
135         printf("L7 = (1) On\n");
136         printf("\n");
137     break;
138     case '6': number=6;
139         printf("\n");
140         printf("L1 = (1) On\n");
141         printf("L2 = (1) On\n");
142         printf("L3 = (0) Off\n");
143         printf("L4 = (1) On\n");
144         printf("L5 = (1) On\n");
145         printf("L6 = (1) On\n");
146         printf("L7 = (1) On\n");
147         printf("\n");
148     break;
149     case '7': number=7;
150         printf("\n");
151         printf("L1 = (1) On\n");
152         printf("L2 = (0) Off\n");
153         printf("L3 = (1) On\n");
154         printf("L4 = (0) Off\n");
155         printf("L5 = (0) Off\n");
156         printf("L6 = (1) On\n");
157         printf("L7 = (0) Off\n");
158         printf("\n");
159     break;
160     case '8': number=8;
161         printf("\n");
162         printf("L1 = (1) On\n");
163         printf("L2 = (1) On\n");
164         printf("L3 = (1) On\n");
165         printf("L4 = (1) On\n");
166         printf("L5 = (1) On\n");
167         printf("L6 = (1) On\n");
168         printf("L7 = (1) On\n");
169         printf("\n");
170     break;
171     case '9': number=9;
172         printf("\n");
173         printf("L1 = (1) On\n");
174         printf("L2 = (1) On\n");
175         printf("L3 = (1) On\n");
176         printf("L4 = (1) On\n");
177         printf("L5 = (0) Off\n");
178         printf("L6 = (1) On\n");
179         printf("L7 = (1) On\n");
180         printf("\n");
181     break;
182     default: number=' ';
183 }
184 if(a<MAX_DIGITS){
185     process_digit(number,a);
186     a++;
187 }
188 }
189 print_digits_array();
190 return 0;
191 }

```

1. Tampilan Antarmuka

```
"D:\Bahasa Pemrograman\Bahasa C\Program Seven Segments\Program 7 Segments.exe"
=====
TUGAS AKHIR SEMESTER LOGIKA INFORMATIKA
-- SEVEN SEGMENTS --
Menggunakan Metode Define MAX_DIGITS 10
=====
                Oleh
            Muhammad Firyanul Rizky
                1708561006
=====

Masukkan angka : _
```

2. Tampilan Proses

```
"D:\Bahasa Pemrograman\Bahasa C\Program Seven Segments\Program 7 Segments.exe"
=====
TUGAS AKHIR SEMESTER LOGIKA INFORMATIKA
-- SEVEN SEGMENTS --
Menggunakan Metode Define MAX_DIGITS 10
=====
                Oleh
            Muhammad Firyanul Rizky
                1708561006
=====

Masukkan angka : 1706

L1 = <0> Off
L2 = <0> Off
L3 = <1> On
L4 = <0> Off
L5 = <0> Off
L6 = <1> On
L7 = <0> Off

L1 = <1> On
L2 = <0> Off
L3 = <1> On
L4 = <0> Off
L5 = <0> Off
L6 = <1> On
L7 = <0> Off

L1 = <1> On
L2 = <1> On
L3 = <1> On
L4 = <0> Off
L5 = <1> On
L6 = <1> On
L7 = <1> On

L1 = <1> On
L2 = <1> On
L3 = <0> Off
L4 = <1> On
L5 = <1> On
L6 = <1> On
L7 = <1> On

1 7 0 6

Process returned 0 (0x0)   execution time : 5.640 s
```