TUGAS AKHIR SEMESTER

MATAKULIAH LOGIKA INFORMATIKA

-- SEVEN SEGMENT --

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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

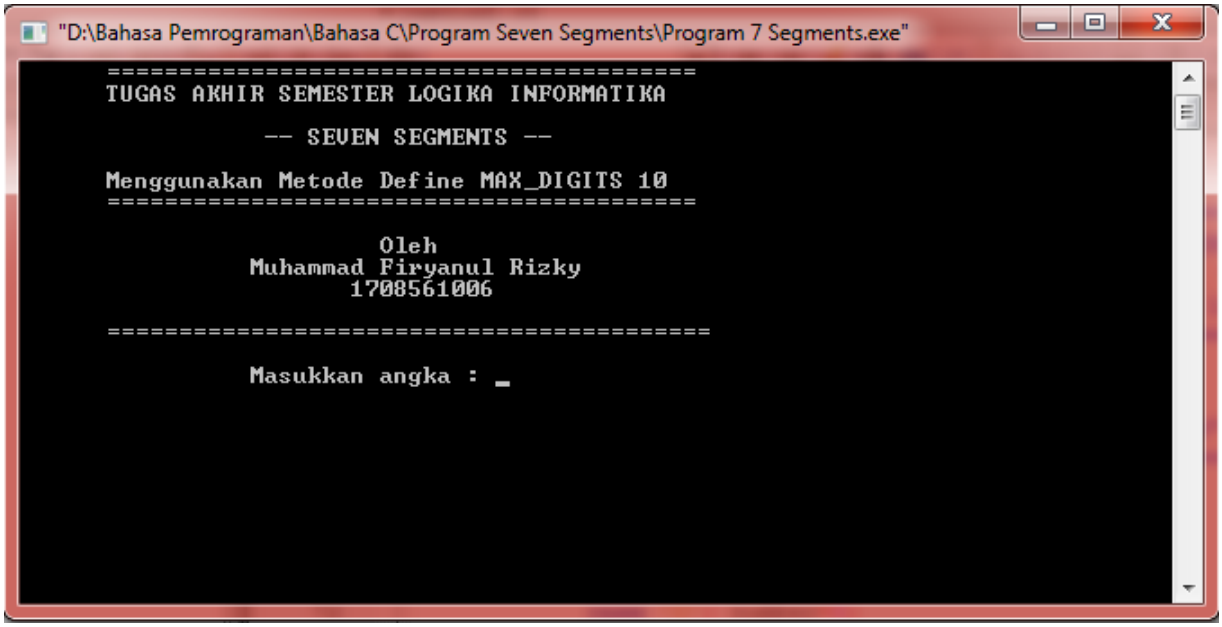
```c
#include <stdio.h>
#define MAX_DIGITS 10

//Program Seven Segment menggunakan fungsi define MAX_DIGITS 10
int clear_digits_array(void);
int process_digit(int digit, int position);
int print_digits_array(void);
char digits[3][MAX_DIGITS*4];
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},};

int clear_digits_array(void){
    int j=0,i=0;
    for(i=0;i<3;i++){
        for(j=0;j<MAX_DIGITS*4;j++){
            digits[i][j]=' ';
        }
    }
}

int process_digit(int digit, int position){
    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");
```

```
    printf("                        1708561006      \n\n");
    printf("      ========================================\n");
    printf("                Masukkan angka : ");
    while ((character_number=getchar())!='\n') {
        int number=MAX_DIGITS;
        switch(character_number){
            case '0': number=0;
                printf("\n");
                printf("L1 = (1) On\n");
                printf("L2 = (1) On\n");
                printf("L3 = (1) On\n");
                printf("L4 = (0) Off\n");
                printf("L5 = (1) On\n");
                printf("L6 = (1) On\n");
                printf("L7 = (1) On\n");
                printf("\n");
            break;
            case '1': number=1;
                printf("\n");
                printf("L1 = (0) Off\n");
                printf("L2 = (0) Off\n");
                printf("L3 = (1) On\n");
                printf("L4 = (0) Off\n");
                printf("L5 = (0) Off\n");
                printf("L6 = (1) On\n");
                printf("L7 = (0) Off\n");
                printf("\n");
            break;
            case '2': number=2;
                printf("\n");
                printf("L1 = (1) On\n");
                printf("L2 = (0) Off\n");
                printf("L3 = (1) On\n");
                printf("L4 = (1) On\n");
                printf("L5 = (1) On\n");
                printf("L6 = (0) Off\n");
                printf("L7 = (1) On\n");
                printf("\n");
            break;
            case '3': number=3;
                printf("\n");
                printf("L1 = (1) On\n");
                printf("L2 = (0) Off\n");
                printf("L3 = (1) On\n");
                printf("L4 = (1) On\n");
                printf("L5 = (0) Off\n");
                printf("L6 = (1) On\n");
                printf("L7 = (1) On\n");
                printf("\n");
            break;
            case '4': number=4;
                printf("\n");
                printf("L1 = (0) Off\n");
                printf("L2 = (1) On\n");
                printf("L3 = (1) On\n");
                printf("L4 = (1) On\n");
                printf("L5 = (0) Off\n");
                printf("L6 = (1) On\n");
                printf("L7 = (0) Off\n");
                printf("\n");
            break;
            case '5': number=5;
                printf("\n");
                printf("L1 = (1) On\n");
                printf("L2 = (1) On\n");
                printf("L3 = (0) Off\n");
```

```
                printf("L4 = (1) On\n");
                printf("L5 = (0) Off\n");
                printf("L6 = (1) On\n");
                printf("L7 = (1) On\n");
                printf("\n");
            break;
            case '6': number=6;
                printf("\n");
                printf("L1 = (1) On\n");
                printf("L2 = (1) On\n");
                printf("L3 = (0) Off\n");
                printf("L4 = (1) On\n");
                printf("L5 = (1) On\n");
                printf("L6 = (1) On\n");
                printf("L7 = (1) On\n");
                printf("\n");
                break;
            case '7': number=7;
                printf("\n");
                printf("L1 = (1) On\n");
                printf("L2 = (0) Off\n");
                printf("L3 = (1) On\n");
                printf("L4 = (0) Off\n");
                printf("L5 = (0) Off\n");
                printf("L6 = (1) On\n");
                printf("L7 = (0) Off\n");
                printf("\n");
            break;
            case '8': number=8;
                printf("\n");
                printf("L1 = (1) On\n");
                printf("L2 = (1) On\n");
                printf("L3 = (1) On\n");
                printf("L4 = (1) On\n");
                printf("L5 = (1) On\n");
                printf("L6 = (1) On\n");
                printf("L7 = (1) On\n");
                printf("\n");
            break;
            case '9': number=9;
                printf("\n");
                printf("L1 = (1) On\n");
                printf("L2 = (1) On\n");
                printf("L3 = (1) On\n");
                printf("L4 = (1) On\n");
                printf("L5 = (0) Off\n");
                printf("L6 = (1) On\n");
                printf("L7 = (1) On\n");
                printf("\n");
            break;
            default: number=' ';
        }
        if(a<MAX_DIGITS){
            process_digit(number,a);
            a++;
        }
    }
    print_digits_array();
    return 0;
}
```

1. Tampilan Antarmuka



2. Tampilan Proses