

BMS 302 MİKROKONTROLCÜLER

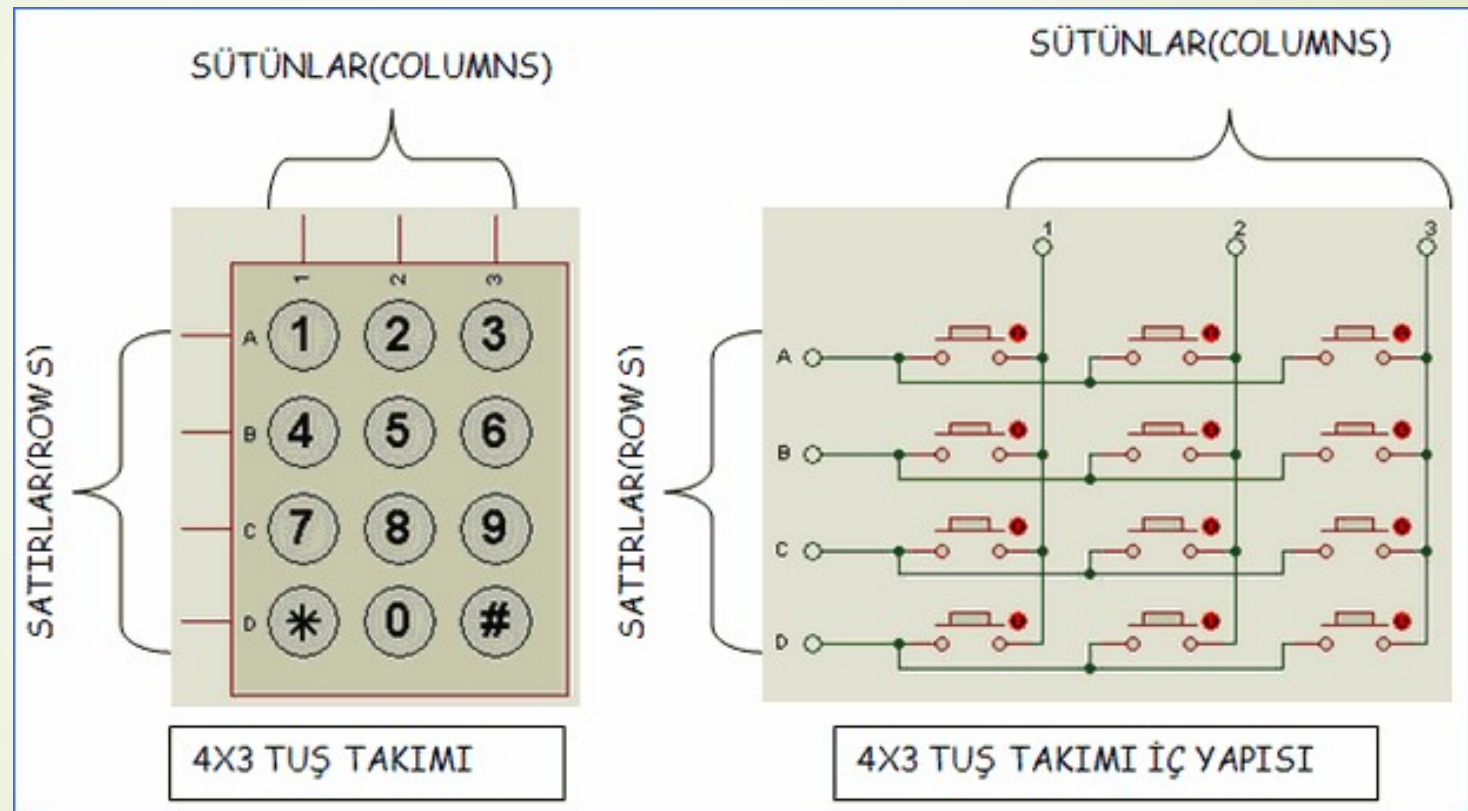
TUŞ TAKIMI UYGULAMALARI

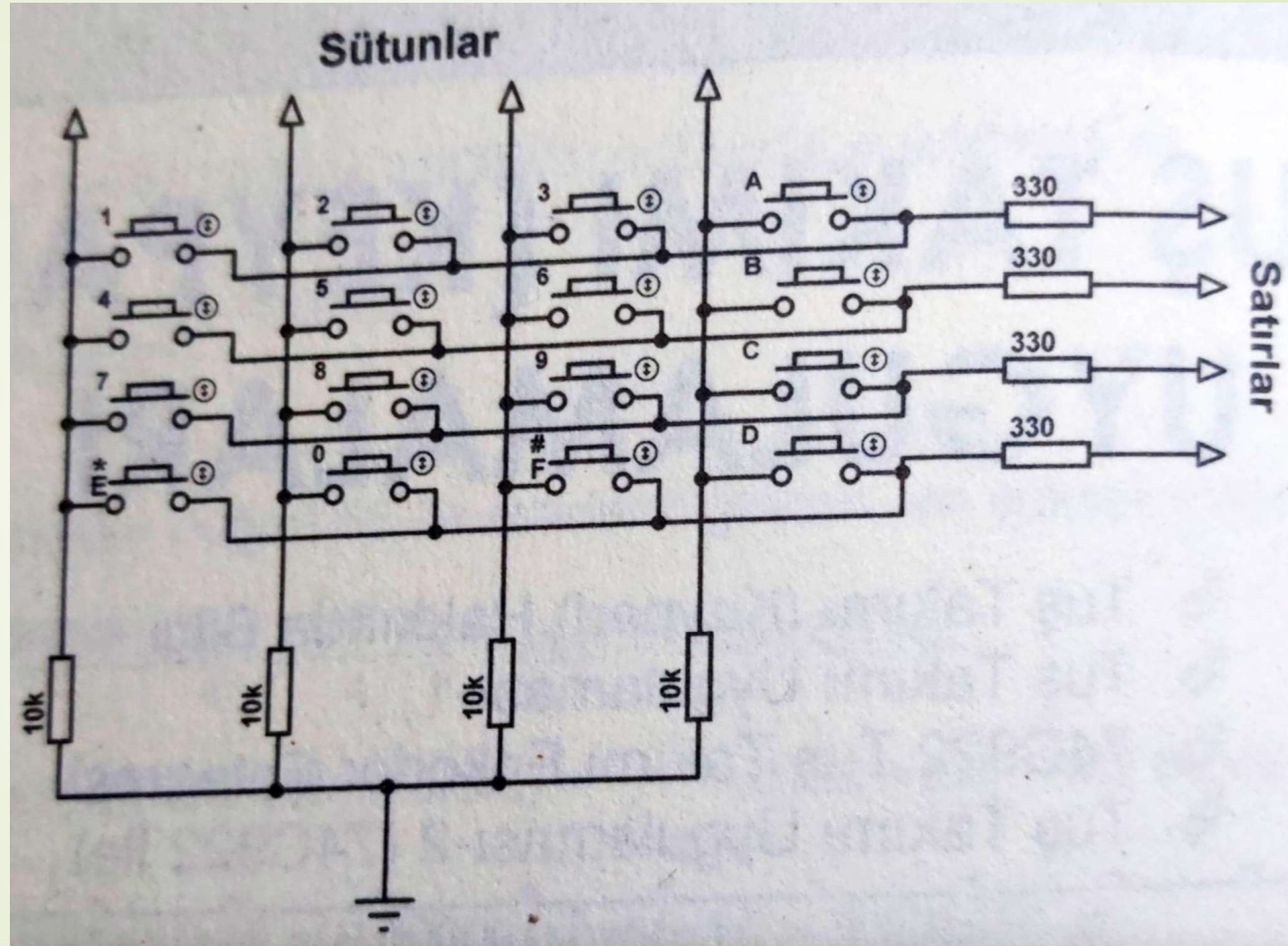
Prof.Dr. Mutlu AVCI

Çukurova Üniversitesi Biyomedikal Mühendisliği Bölümü

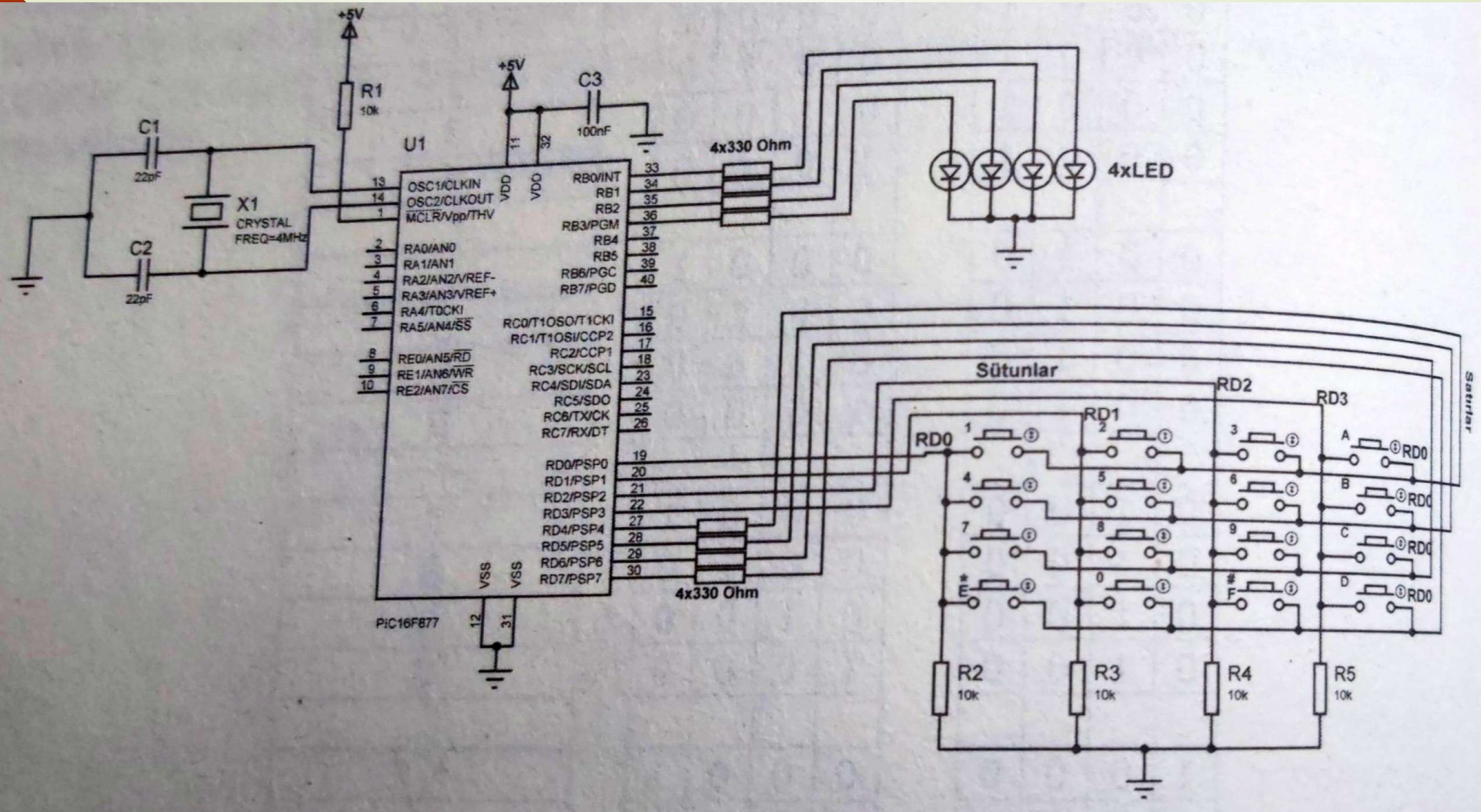
Bahar 2020







Satırlar				Sütunlar				Basılan Tuş
4	3	2	1	4	3	2	1	
0	0	0	1	0	0	0	1	1
0	0	0	1	0	0	1	0	2
0	0	0	1	0	1	0	0	3
0	0	0	1	1	0	0	0	A
0	0	1	0	0	0	0	1	4
0	0	1	0	0	0	1	0	5
0	0	1	0	0	1	0	0	6
0	0	1	0	1	0	0	0	B
0	1	0	0	0	0	0	1	7
0	1	0	0	0	0	1	0	8
0	1	0	0	0	1	0	0	9
0	1	0	0	1	0	0	0	C
1	0	0	0	0	0	0	1	*, E
1	0	0	0	0	0	1	0	0
1	0	0	0	0	1	0	0	#, F
1	0	0	0	1	0	0	0	D





```
#include <prog.h>
char tus=0xFF,sonuc;
char tus_oku(){
    output_D(0x00);
    Output_high(pin_D4);
    if(input(pin_D0))
    {while(input(pin_D0);
    tus=1;}
    if(input(pin_D1))
    {while(input(pin_D1);
    tus=2;}
    if(input(pin_D2))
    {while(input(pin_D2);
    tus=3;}
```

```
if(input(pin_D3))
{while(input(pin_D3);
tus=0x0A;}
output_low(pin_D4);
Output_high(pin_D5);
if(input(pin_D0))
{while(input(pin_D0);
tus=4;}
if(input(pin_D1))
{while(input(pin_D1);
tus=5;}
if(input(pin_D2))
{while(input(pin_D2);
tus=6;}
```



```
if(input(pin_D3))
{while(input(pin_D3);
tus=0x0B;}
output_low(pin_D5);
Output_high(pin_D6);
if(input(pin_D0))
{while(input(pin_D0);
tus=7;}
if(input(pin_D1))
{while(input(pin_D1);
tus=8;}
if(input(pin_D2))
{while(input(pin_D2);
tus=9;}
```

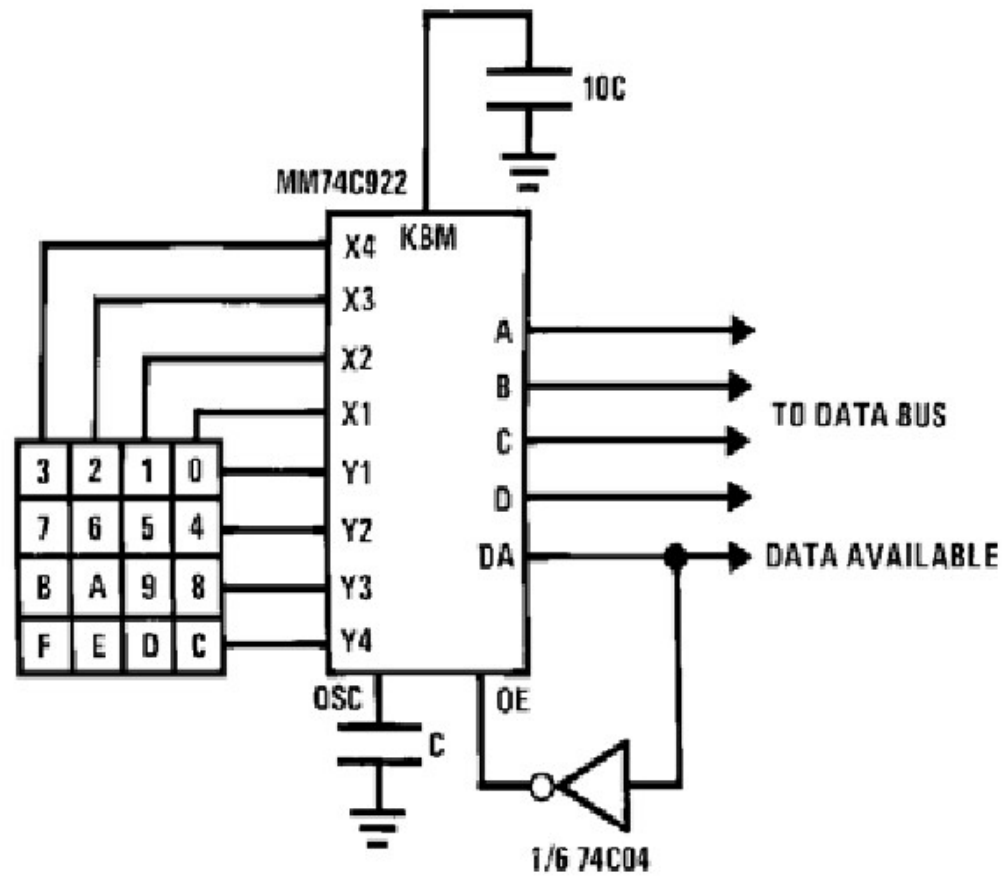
```
if(input(pin_D3))
{while(input(pin_D3);
tus=0x0C;}
output_low(pin_D6);
Output_high(pin_D7);
if(input(pin_D0))
{while(input(pin_D0);
tus=0x0E;}
if(input(pin_D1))
{while(input(pin_D1);
tus=0;}
if(input(pin_D2))
{while(input(pin_D2);
tus=0x0F;}
```

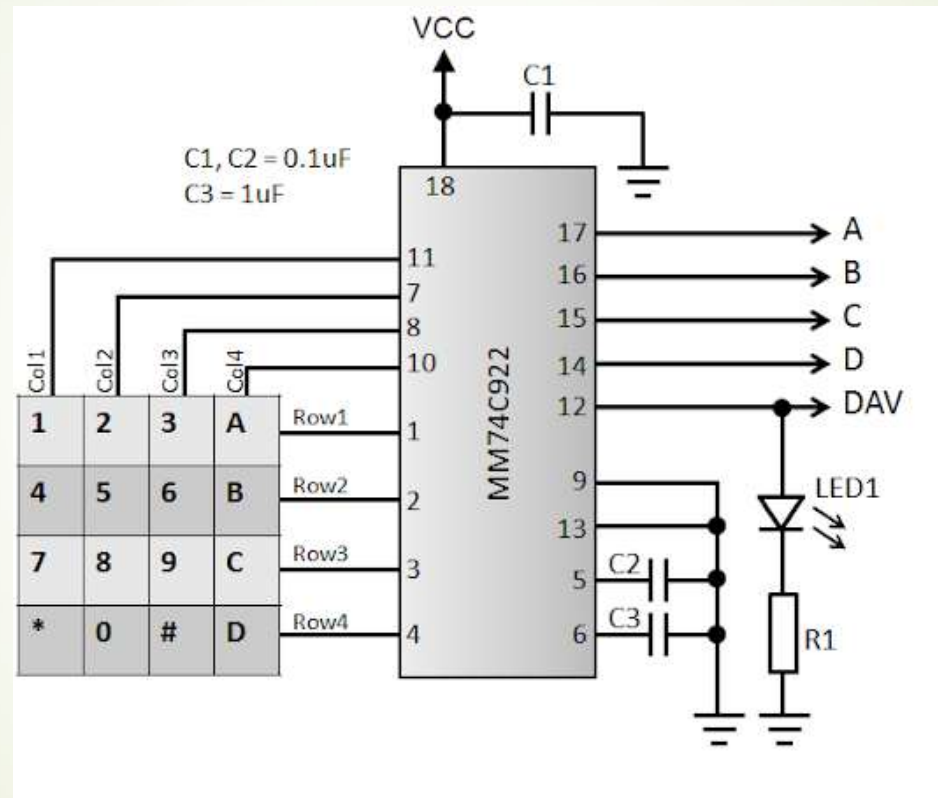


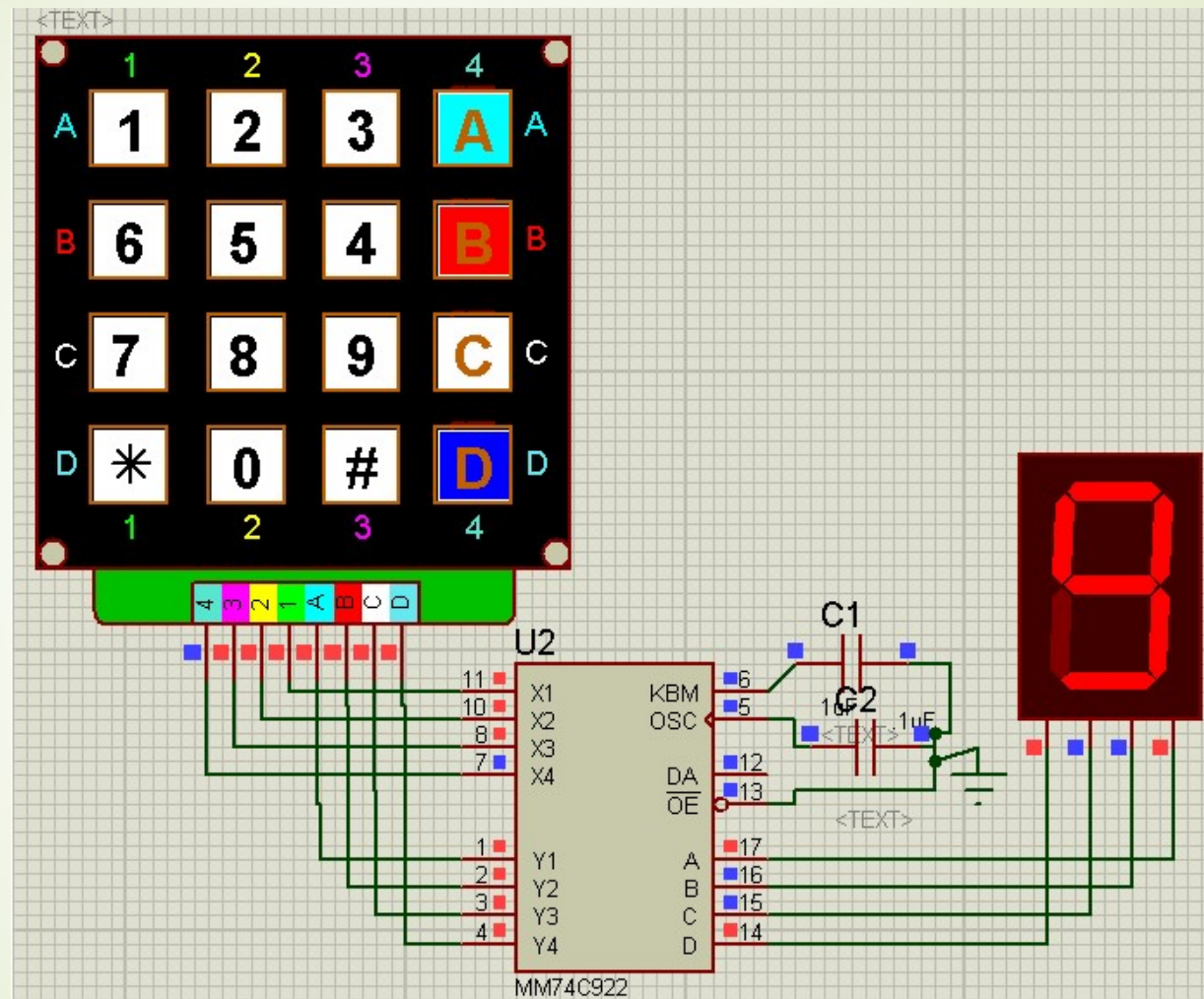
```
if(input(pin_D3))  
{while(input(pin_D3);  
tus=0x0D;}  
output_low(pin_D7);  
return tus;}
```

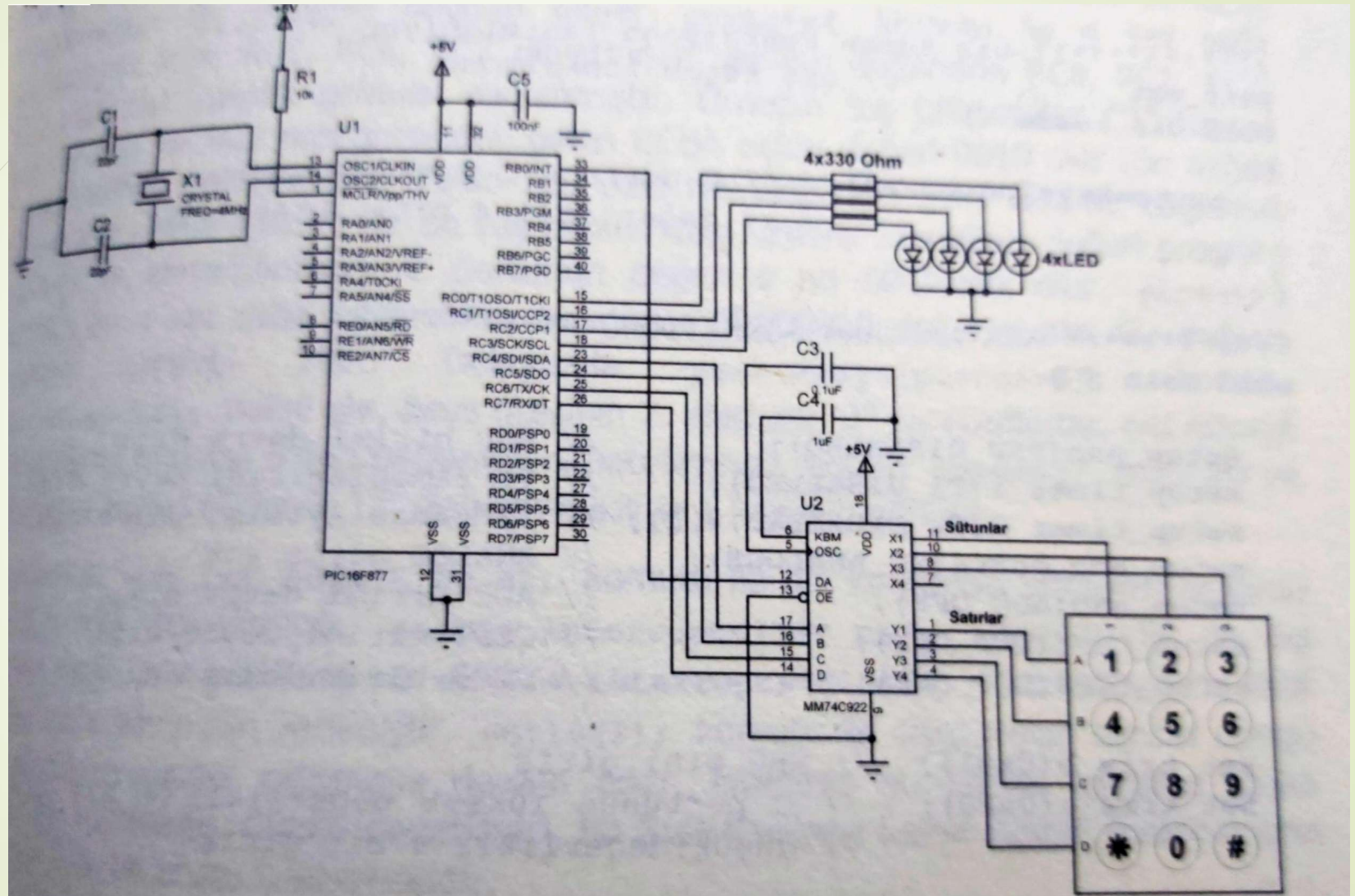
```
void main(){  
Output_b(0x00);  
While(1){  
sonuc=tus_oku();  
if (sonuc!=FF)  
Output_B(sonuc);}
```

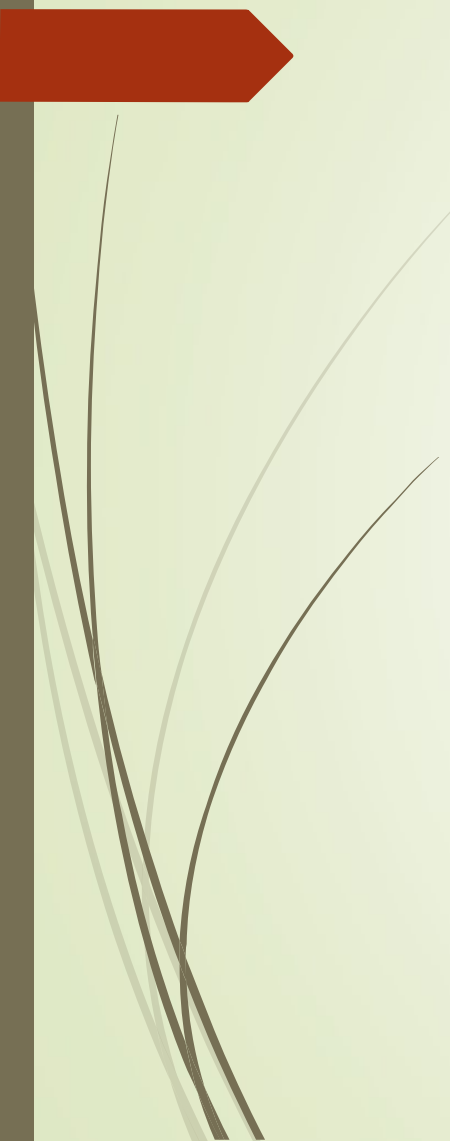
74C922 Key Encoder





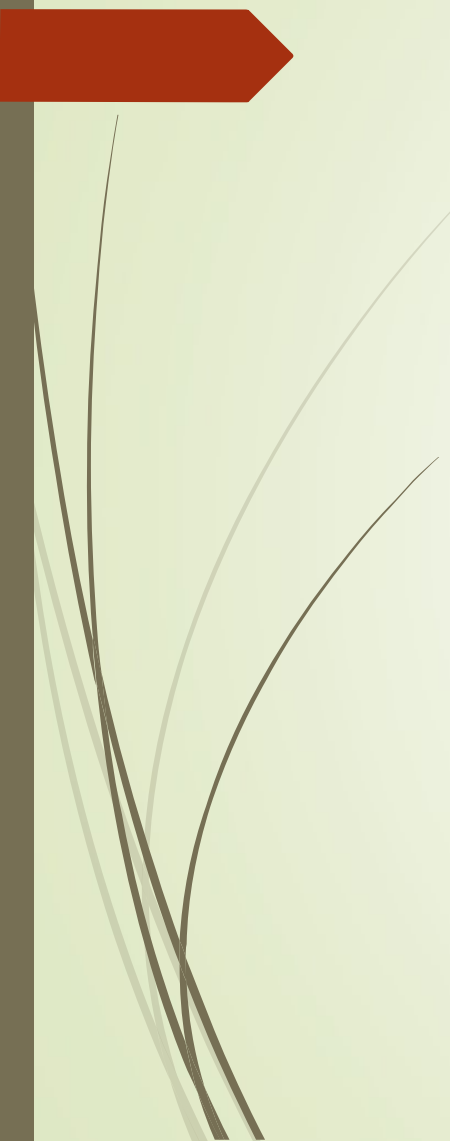






```
#include<prog.h>
#use fast_io(B)
#use fast_io(C)
#byte portc=0x07
char keys[]={1,2,3,0,4,5,6,0,7,8,9,0,0x0A,0,0x0B,0};

#int_ext
void fks(){
portc=keys[portc>>4];
}
```



```
void main(){  
    set_tris_B(0x01);  
    set_tris_C(0xF0);  
    ext_int_edge(L_TO_H);  
    enable_interrupts(INT_EXT);  
    enable_interrupts(GLOBAL);  
    portc=0;  
    while(1);  
}
```