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Write a program in Embedded C for:-

1.Blinking of LED

2.Chasing of LED

3.BCD adder

4.HEX counter

5.ASCII counter

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-----

Code for 1<sup>st</sup> part

```
#include <reg51.h>
```

```
void MSDelay(unsigned int);
```

```
void main(void)
```

```
{
```

```
    while(1)
```

```
    {
```

```
        P1=0X55;
```

```
        MSDelay(1000);
```

```
        P1=0XAA;
```

```
        MSDelay(1000);
```

```
    }
```

```
}
```

```
void MSdelay(unsigned int itime)
```

```
{
```

```
    unsigned int i,j;
```

```
    for(i=0;i<itime;i++)
```

```
    {
```

```
        for(j=0;j<1275;j++)
```

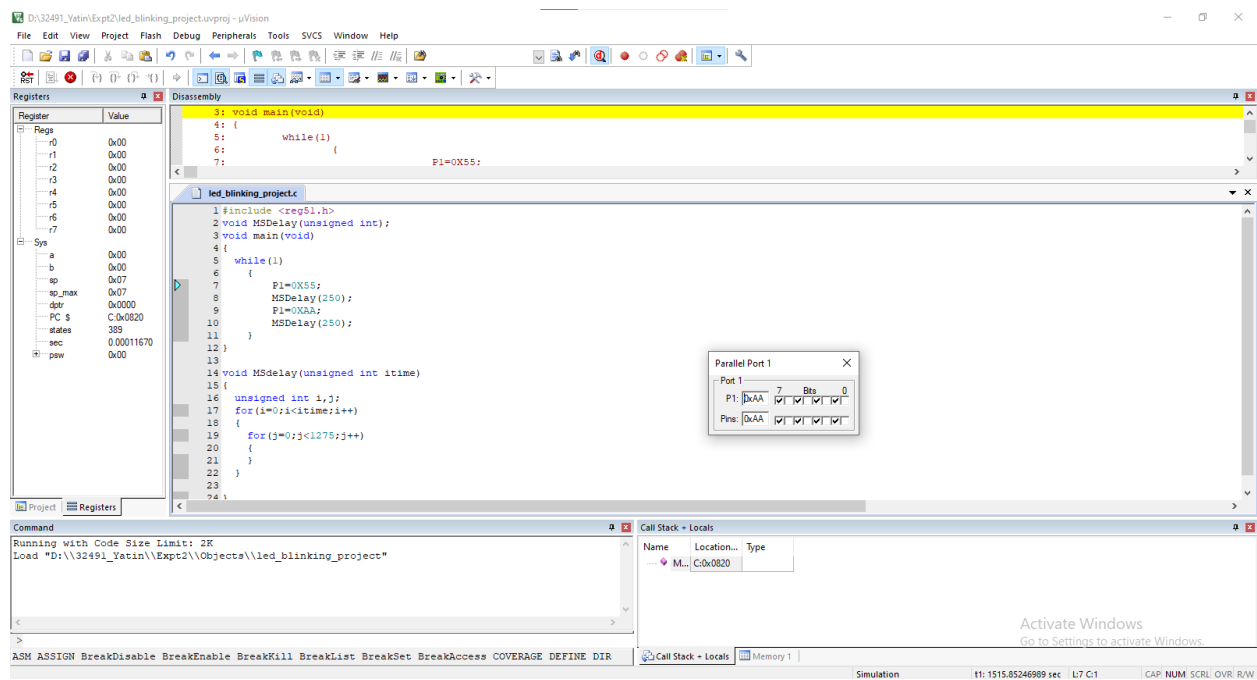
```
        {
```

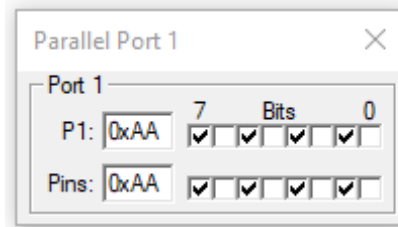
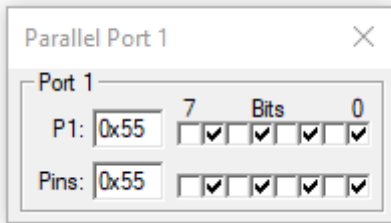
```
        }
```

```
    }
```

```
}
```

## Output





Code for 2<sup>nd</sup> Part

```
#include <reg51.h>
```

```
void MSDelay(unsigned int);
```

```
void main(void)
```

```
{
```

```
    while(1)
```

```
    {
```

```
        unsigned int z;
```

```
        P1=0X01;
```

```
        for(z=0;z<9;z++)
```

```
        {
```

```
            MSDelay(500);
```

```
            P1=P1<<1;
```

```
        }
```

```
    }
```

```
}
```

```
void MSDelay(unsigned int itime)
```

```
{
```

```

    unsigned int i,j;

    for(i=0;i<itime;i++)

    {

        for(j=0;j<1275;j++)

        {

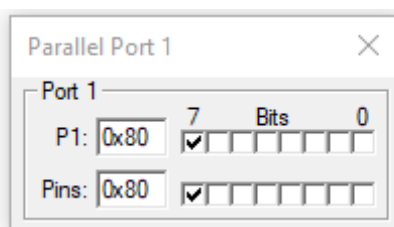
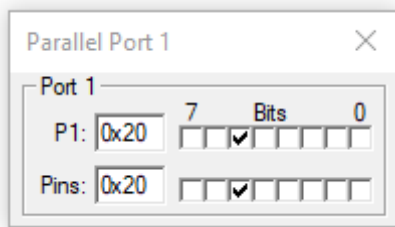
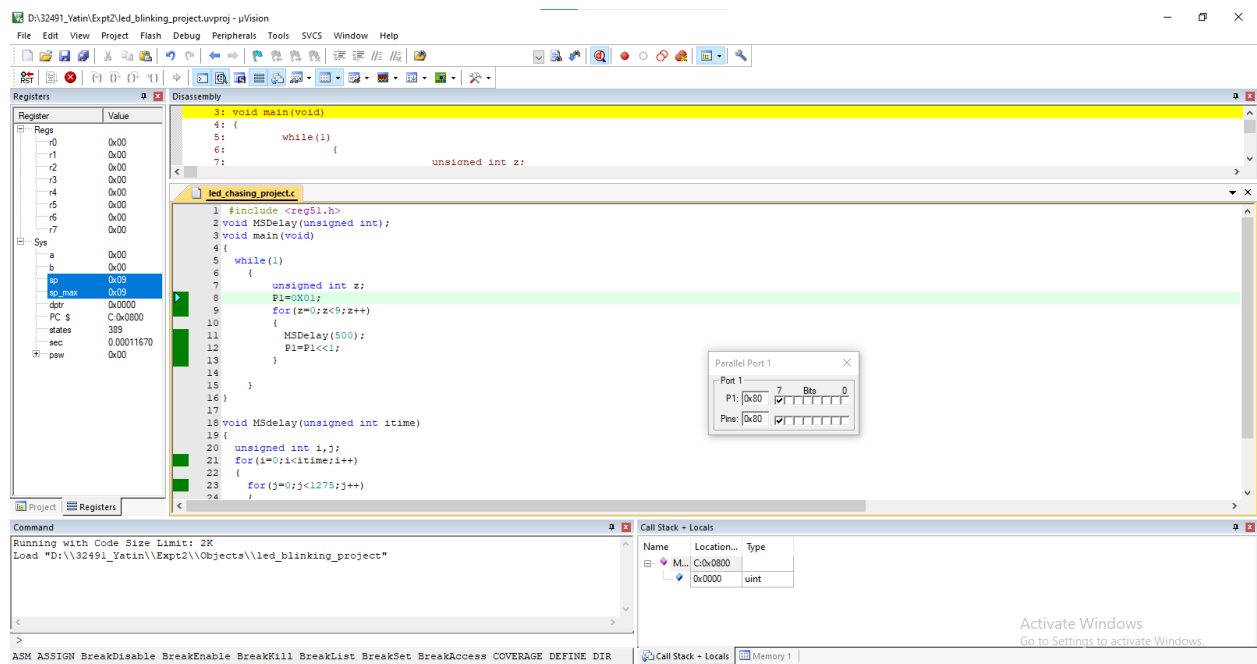
        }

    }

}

```

## Output



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Code for 3<sup>rd</sup> Part : BCD Adder

```
void main(void)
{
    unsigned int s,z;
    for(s=0;s<=9;s++)
    {
        for(z=0;z<=9;z++)
        {
            P1=(s<<4)|z;
            MSDelay(1000);
        }
    }
}
```

```
void MSdelay(unsigned int itime)
{
    unsigned int i,j;
    for(i=0;i<itime;i++)
    {
        for(j=0;j<1275;j++)
        {
        }
    }
}
```

}

## Output

The screenshot shows the uVision IDE interface. The main window displays the disassembly of a program. The registers window on the left shows the current state of the registers. The command window at the bottom shows the error message: "error 65: access violation at C:\0x0A00: no 'execute/read' permission".

**Registers:**

Register	Value
r0	0x00
r1	0x00
r2	0x04
r3	0x0c
r4	0x03
r5	0x08
r6	0x03
r7	0x08

**Disassembly:**

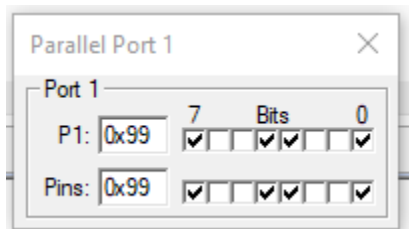
```
1: 0x0A00 00 NOP
2: 0x0A01 00 NOP
3: 0x0A02 00 NOP
4: 0x0A03 00 NOP
5: 0x0A04 00 NOP
6: 0x0A05 00 NOP
7: 0x0A06 00 NOP
8: 0x0A07 00 NOP
9: 0x0A08 00 NOP
10: 0x0A09 00 NOP
11: 0x0A0A 00 NOP
12: 0x0A0B 00 NOP
13: 0x0A0C 00 NOP
14: 0x0A0D 00 NOP
15: 0x0A0E 00 NOP
16: 0x0A0F 00 NOP
17: 0x0A10 00 NOP
18: 0x0A11 00 NOP
19: 0x0A12 00 NOP
20: 0x0A13 00 NOP
21: 0x0A14 00 NOP
22: 0x0A15 00 NOP
23: 0x0A16 00 NOP
24: 0x0A17 00 NOP
25: 0x0A18 00 NOP
```

**Command:**

```
Running with Code Size Limit: 2K
Load "D:\32491_Yatin\Expt2\Objects\bcd_adder"
*** error 65: access violation at C:\0x0A00: no 'execute/read' permission
```

**Call Stack - Locals:**

Name	Location...	Type
0x0A00	C:\0x0A00	uint
0x0A0A	C:\0x0A0A	uint



---

Code for 4<sup>th</sup> Part: HEX

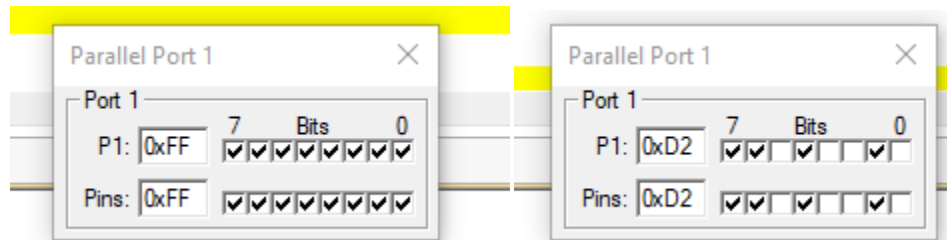
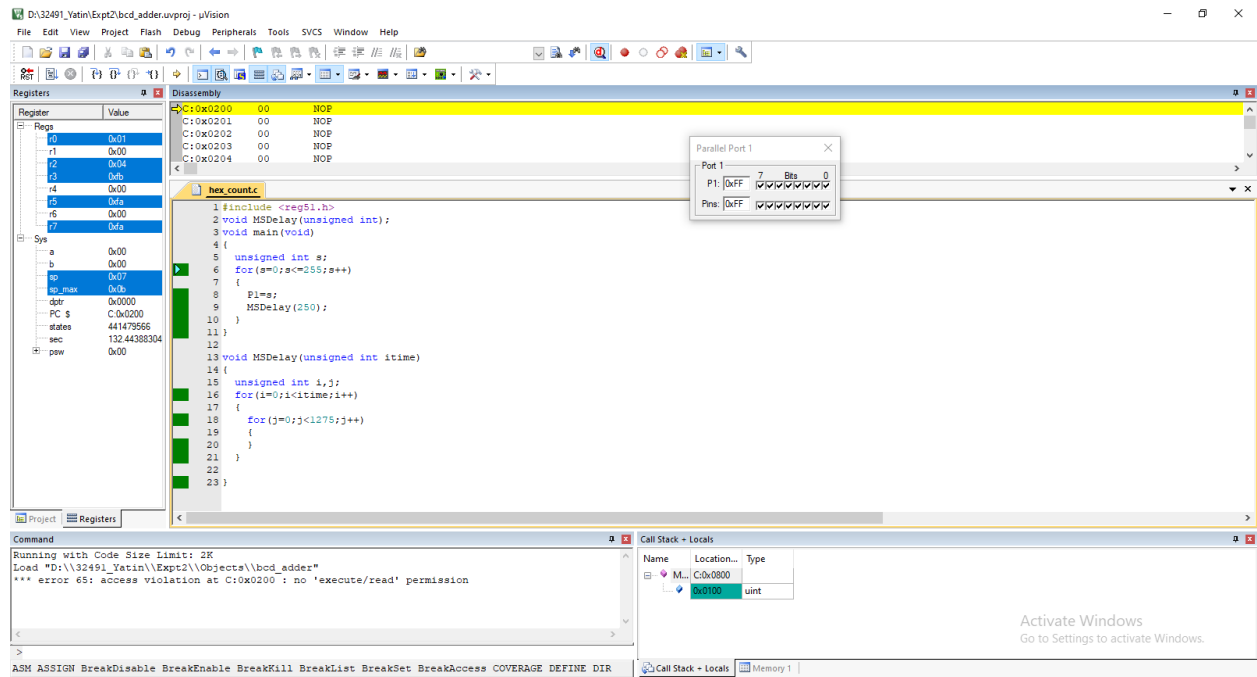
```
#include <reg51.h>

void MSDelay(unsigned int);

void main(void)
{
    unsigned int s;
    for(s=0;s<=255;s++)
    {
        P1=s;
        MSDelay(250);
    }
}

void MSDelay(unsigned int itime)
{
    unsigned int i,j;
    for(i=0;i<itime;i++)
    {
        for(j=0;j<1275;j++)
        {
        }
    }
}
```

## Output





---

Code for 5<sup>th</sup> Part : ASCII

```
#include <reg51.h>

void MSDelay(unsigned int);

void main(void)
{
    unsigned int s;
    for(s='A';s<='Z';s++)
    {
        P1=s;
        MSDelay(1000);
    }
}

void MSDelay(unsigned int itime)
{
    unsigned int i,j;
    for(i=0;i<itime;i++)
    {
        for(j=0;j<1275;j++)
        {
        }
    }
}
```

## Output

D:\32491\_Yatin\Expt2\bcd\_adder.uvproj - uVision

File Edit View Project Flash Debug Peripherals Tools SVCS Window Help

Registers

Register	Value
r0	0x00
r1	0x00
r2	0x04
r3	0x06
r4	0x03
r5	0x05
r6	0x03
r7	0x08

Disassembly

Address	Instruction
C:0x5B00	00 NOP
C:0x5B01	00 NOP
C:0x5B02	00 NOP
C:0x5B03	00 NOP
C:0x5B04	00 NOP

Parallel Port 1

Port 1	7	Bits	0
P1: 0x5A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pins: 0x5A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Command

Running with Code Size Limit: 2K  
Load "D:\32491\_Yatin\Expt2\Objects\bcd\_adder"  
\*\*\* error 65: access violation at C:0x5B00 : no 'execute/read' permission

Call Stack - Locals

Name	Location...	Type
M...	C:0x0800	uint

ASM ASSIGN BreakDisable BreakEnable BreakKill BreakList BreakSet BreakAccess COVERAGE DEFINE DIR

Activate Windows  
Go to Settings to activate Windows.

