

**REVIEW – 1**

| **Sl.No** | **Name** | **USN** |
| --- | --- | --- |
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Guide Signature

**PROBLEM STATEMENT**

* **PRE-EMPTIVE Write a C code to demonstrate the concept of Task Switching   
  1st Task- Toggle leds.  
  2nd Task- Display on Seven segment   
  3rd Task- Rotate stepper motor clockwise**

**CODE:**

#include<rtl.h>

#include<lpc21xx.h>

#include<stdio.h>

void sev(void);

void delay(void);

OS\_TID tsk1,tsk2,tsk3; //declare task identification number

int cnt1,cnt2;

char arri[20];

\_\_task void job1(void); //led

\_\_task void job2(void); // sev segment

\_\_task void job3(void); //Stepper motor

unsigned int Disp[16] = {0x003F0000,0x00060000,0x005B0000,0x004F0000,0x00660000,

0x006D0000,0x007D0000,0x00070000,0x007F0000,0x006F0000,};

\_\_task void job1(void)

{

IODIR0 = 0x00ff0000;

os\_tsk\_prio\_self(2); //assign priority to job1

tsk2 = os\_tsk\_create(job2,1); //create job2

while(1)

{

IOCLR0 = 0x000F0000; //LEDS on

for(i=0;i<100000;i++);

for(i=0;i<100000;i++);

IOSET0 = 0x000f0000; //LEDS off

for(i=0;i<100000;i++);

for(i=0;i<100000;i++);

os\_tsk\_prio(tsk2,2); //change priority to tsk2

}

}

\_\_task void job2(void) //job2 functiion declaration

{

tsk3 = os\_tsk\_create(job3,0); //create job3

while(1)

{

sev();

os\_tsk\_prio(tsk3,3); //change priority to tsk3

}

}

\_\_task void job3(void) //job3function declaration

{

PINSEL0 = 0x00000000;

IODIR0 = 0x0000F000;

while(1)

{

IOSET0 = 0x00008000;

delay(650000);

IOCLR0 = 0x00008000;

IOSET0 = 0x00004000;

delay(650000);

IOCLR0 = 0x00004000;

IOSET0 = 0x00002000;

delay(650000);

IOCLR0 = 0x00002000;

IOSET0 = 0x00001000;

delay(650000);

IOCLR0 = 0x00001000;

delay(650000);

}

}

void sev(void)

{

IODIR0 = 0x00ff0000;

IOSET0 = 0xf0000000;

for(i=0;i<10;i++)

{

IOSET0 = Disp[i];

delay();

IOCLR0 = 0x00ff0000;

}

}

void delay(void)

{

unsigned long int j;

for (j=0; j<6500000; j++);

}

int main(void)

{

cnt1= 0;

cnt2 =0;

os\_sys\_init(job1); //initialize job1

while(1);

}

**IMPLEMENTATION**



