

**REVIEW – 1**

| **Sl.No** | **Name** | **USN** |
| --- | --- | --- |
| 01 | Ghadage Shubham S | 02FE21BEC034 |
| 02 | Dongare Pooja S | 02FE21BEC032 |
| 03 | Omkar Anvekar | 02FE21BEC055 |
| 04 | Meenaxi S | 02FE21BEC050 |



Guide Signature

**PROBLEM STATEMENT**

**Write a C program to demonstrate the concept of task switching mechanism for 2 tasks.**

**Task 1: Display counter values on hyper terminal**

**Task 2: Toggle LEDs.**

**CODE:**

#include <lpc21xx.h>

#include <rtl.h>

#include <stdio.h>

// Function declarations

void sev(void);

void cmd(unsigned int);

void data(unsigned int);

void delay(unsigned int);

void delay1(void);

void serial(void);

unsigned char msg;/\*\*/

void init\_serial(void);

unsigned int counter1, i;

char arr1[20];

void uart\_init(void);

unsigned int b;

unsigned char \*ptr;

unsigned char arr[] = "1 2 3 4 5 6 7 8 9\n";

//Task declarations

\_\_task void job1 (void);

\_\_task void job2 (void);

// Task 1 definition

\_\_task void job1 (void)

{

os\_tsk\_create (job2, 0); /\* Create task 2 and mark it as ready \*/

/\* loop forever \*/

while(1)

{

sev() ;

}

}

// Task 2 definition

\_\_task void job2 (void)

{

while (1)

{

IODIR0=0X000F0000;

while (1)

{

IOCLR0=0X000F0000;//LEDs ON

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

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++);

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

sev();

}

}

}

// Function to transmit a string via UART

void sev(void)

{

while(1)

{

uart\_init();

ptr = arr;

while(\*ptr != '\0' )

{

U0THR = \*ptr++;

while(!(U0LSR & 0x20)==0x20);

for ( b=0; b<=600; b++);

}

for ( b=0; b<=60000; b++);

job2();

}

}

// Function to initialize UART

void uart\_init(void)

{

/\*PINSEL0 = 0Z0000005;

U0LCR = 0Z0000005;

U0DLM = 0Z00;

U0DLL = 0x13;

U0LCR = 0Z0000005;\*/

PINSEL0 = 0x00000005;

U0LCR = 0x83;

U0DLL = 0x61;

U0LCR = 0x03;

U0IER = 0x01;

}

// Function for delay

void delay1(void)

{

unsigned long int j;

for(j=0;j<65000;j++);

}

// Main function

int main (void)

{

os\_sys\_init (job1);

while(1);

}

**IMPLEMENTATION**

