

**KLE****TECHNOLOGICAL UNIVERSITY**
Creating Value, Leveraging Knowledge**Belagavi
Campus****DR. M. S. SHESHGIRI COLLEGE OF ENGINEERING AND TECHNOLOGY**

GROUP-15

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Problem statement:

Write C program with three tasks and resource UART.

Under the Guidance of

Guide Signature

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Code

```
#include<lpc21xx.h>
#include<rtl.h>
#include<stdio.h>
```

```
unsigned int i;
unsigned char msg1[] = {"welcome"};
unsigned char msg2[] = {"HELLO "};
```

```

unsigned char msg3[] = {"hey"};
unsigned char mg1, mg2, mg3;
OS_TID t1, t2, t3;
OS_MUT uart_mutex;

void delay(unsigned int n)
{
    unsigned int j;
    for (j = 0; j < n; j++)
        ;
}

void serial()
{
    PINSEL0 = 0x00000005;
    U0LCR = 0x83;
    U0DLL = 0x61;
    U0LCR = 0x03;
}

__task void job2(void);
__task void job3(void);
__task void job1(void)
{
    t1 = os_tsk_self();
    t2 = os_tsk_create(job2, 0);
    t3 = os_tsk_create(job3, 0);

    os_evt_wait_or(0x0003, 0x0005);

    while (1)
    {
        os_mut_wait(&uart_mutex, 0xffff);
        while (msg1[i] != '\0')
        {
            while (!(U0LSR & 0x20))
                ;
            U0THR = msg1[i];
            i++;
        }
        U0THR = U0RBR;
        delay(10000000);
        i = 0;
        os_mut_release(&uart_mutex);
    }

    os_evt_set(0x0001, t2);
}

__task void job2(void)
{
    os_evt_wait_or(0x0001, 0x0005);

    while (1)
    {

```

```

    os_mut_wait(&uart_mutex, 0xffff);
    while (msg2[i] != '\0')
    {
        while (!(U0LSR & 0x20))
            ;
        U0THR = msg2[i];
        i++;
    }
    U0THR = U0RBR;
    delay(10000000);
    i = 0;
    os_mut_release(&uart_mutex);
}

os_evt_set(0x0002, t3);
}

```

```

__task void job3(void)
{
    os_evt_wait_or(0x0002, 0x0005);

    while (1)
    {
        os_mut_wait(&uart_mutex, 0xffff);
        while (msg3[i] != '\0')
        {
            while (!(U0LSR & 0x20))
                ;
            U0THR = msg3[i];
            i++;
        }
        U0THR = U0RBR;
        delay(10000000);
        i = 0;
        os_mut_release(&uart_mutex);
    }
}

```

```

int main()
{
    serial();
    os_mut_init(&uart_mutex);

    os_sys_init(job1);
    while (1);
}

```

Output

