

**Review – 3**

**Team –A11**

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**Topic - Write a C program with three tasks, having task 1 waiting for an even from task 2 for a duration and flag bits of 0xf000 and 0x000.**

Under The Guidance Of : Guide Signature

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**CODE**

**#include <rtl.h>**

**#include <lpc21xx.h>**

**#include <stdio.h>**

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

**OS\_RESULT RE1, RE2, RE3;**

**int cnt1, cnt2, cnt3, i; // counter**

**\_\_task void job1(void); // declare function for job1**

**\_\_task void job2(void); // declare function for job2**

**\_\_task void job3(void);**

**\_\_task void job1(void) // job1 function definition**

**{**

**os\_tsk\_prio\_self(3); // assign priority to job1 as 3**

**tsk1 = os\_tsk\_self(); // task id**

**os\_tsk\_create(job2, 2); // create job2 and keep in ready state**

**while (1)**

**{**

**RE1 = os\_evt\_wait\_and(0x0001, 0x0010); // wait for event 0x0001**

**if (RE1 == OS\_R\_EVT)**

**{**

**for (i = 0; i < 1; i++)**

**{**

**cnt1++;**

**for (i = 0; i < 65000; i++);**

**}**

**}**

**os\_evt\_set(0xf000, tsk2); // set flag bits 0xf000 for task 2**

**os\_dly\_wait(100); // delay for a duration**

**}**

**}**

**\_\_task void job2(void) // job2 function definition**

**{**

**tsk2 = os\_tsk\_self(); // task id**

**os\_tsk\_create(job3, 1); // create job3 and keep in ready state**

**while (1)**

**{**

**RE2 = os\_evt\_wait\_and(0xf000, 0x0010); // wait for flag bits 0xf000**

**if (RE2 == OS\_R\_EVT)**

**{**

**for (i = 0; i < 1; i++)**

**{**

**cnt2++;**

**for (i = 0; i < 65000; i++);**

**}**

**}**

**os\_evt\_set(0x0001, tsk1); // set event 0x0001 for task 1**

**}**

**}**

**\_\_task void job3(void)**

**{**

**tsk3 = os\_tsk\_self(); // task id**

**while (1)**

**{**

**RE3 = os\_evt\_wait\_and(0x0001, 0x0010); // wait for event 0x0001**

**if (RE3 == OS\_R\_EVT)**

**{**

**for (i = 0; i < 1; i++)**

**{**

**cnt3++;**

**for (i = 0; i < 65000; i++);**

**}**

**}**

**// Additional code for task 3 can be added here if needed**

**}**

**}**

**int main(void)**

**{**

**cnt1 = 0;**

**cnt2 = 0;**

**cnt3 = 0;**

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

**while (1);**

**}**

**OUTPUT**

