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Belagavi Campus
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Department of Electronics and Communication Engineering

# RTOS Lab Review Report

## Group-14

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## Problem Statement:

Write a C program with two tasks and resource DC motor.

## Code:

```
#include <rtl.h>
#include <lpc21xx.h>
#include <string.h>
#include "dc.h"

#define SLAVE_ADDR 78
#define MAX       12
#define AA        2
#define SI        3
#define STO       4
#define STA       5
#define I2EN      6


unsigned int i=0;
OS_TID tsk1, tsk2;
OS_SEM semaphore1;


__task void task1 (void) {
  OS_RESULT ret;


  while (1) {
```

```
   /* Pass control to other tasks for 3 OS ticks */
   os_dly_wait(3);
   /* Wait 1 ticks for the free semaphore */
   ret = os_sem_wait (semaphore1, 1);
   if (ret != OS_R_TMO) {
     /* If there was no time-out the semaphore was aquired */
     //printf ("Task 1\n");
clock_wise();
delay(65000);delay(65000);delay(65000);

     /* Return a token back to a semaphore */
     os_sem_send (semaphore1);
   }
  }
}

__task void task2 (void) {

  while (1)
  {
   /* Wait indefinetly for a free semaphore */
   os_sem_wait (semaphore1, 0xFFFF);
   /* OK, the serial interface is free now, use it. */

    anti_clock_wise();
```

```
delay(65000);delay(65000);delay(65000);
   /* Return a token back to a semaphore. */
   os_sem_send (semaphore1);

 }
}


__task void init (void) {


 /* Initialize the Semaphore before the first use */
 os_sem_init (semaphore1, 1);
 /* Create an instance of task1 with priority 10 */
 tsk1 = os_tsk_create (task1, 10);
 /* Create an instance of task2 with default priority 1 */
 tsk2 = os_tsk_create (task2, 0);
 /* Delete the init task */
 os_tsk_delete_self ();
}



  int main (void)
  {



 os_sys_init (init);
}
```

# Implementation and Output: