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Example Application

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/*  example.c
 *
 *  This file contains an example of a simple RTEMS
 *  application.  It contains a Configuration Table, a
 *  user initialization task, and a simple task.
 *
 *  This example assumes that a board support package exists
 *  and invokes the initialize_executive() directive.
 */

#include "rtems.h"

rtems_task init_task();

#define INIT_NAME      build_name( 'A', 'B', 'C', ' ' )

rtems_initialization_tasks_table init_task = {
  { INIT_NAME,          /* init task name  "ABC"        */
    1024,               /* init task stack size         */
    1,                  /* init task priority           */
    DEFAULT_ATTRIBUTES, /* init task attributes         */
    init_task,          /* init task entry point        */
    TIMESLICE,          /* init task initial mode       */
    0                   /* init task argument           */
  }
};
rtems_configuration_table Config_tbl = {
  NULL,                 /* filled in by the BSP         */
  65536,                /* exective RAM size            */
  2,                    /* maximum tasks                */
  0,                    /* maximum timers               */
  0,                    /* maximum semaphores           */
  0,                    /* maximum message queues       */
  0,                    /* maximum messages             */
  0,                    /* maximum partitions           */
  0,                    /* maximum regions              */
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  0,                    /* maximum ports               */
  0,                    /* maximum periods             */
  0,                    /* maximum extensions          */
  RTEMS_MILLISECONDS_TO_MICROSECONDS(10),
                       /* number of ms in a tick       */
  1,                    /* num of ticks in a timeslice  */
  1,                    /* number of user init tasks    */
  init_task_tbl,        /* user init task(s) table      */
  0,                    /* number of device drivers     */
  NULL,                 /* ptr to driver address table  */
  NULL,                 /* ptr to extension table       */
  NULL                  /* ptr to MP config table       */
};

task user_application(
  rtems_task_argument ignored
);

#define USER_APP_NAME  1  /* any 32-bit name; unique helps */

rtems_task init_task(
  rtems_task_argument ignored
)
{
  rtems_id tid;

  /* example assumes SUCCESSFUL return value */
  (void) task_create( USER_APP_NAME, 1, 1024,
                      NO_PREEMPT, FLOATING_POINT, &tid );
  (void) task_start( tid, user_application, 0 );
  (void) task_delete( SELF );
}

rtems_task user_application()
{
  /* application specific initialization goes here */

  while ( 1 )  {              /* infinite loop */
    /*  APPLICATION CODE GOES HERE
     *
     *  This code will typically include at least one
     *  directive which causes the calling task to
     *  give up the processor.
     */
  }

}
```