KU KONKUK UNIVERSITY

Real-Time Operating Systems

Course Introduction

Fall, 2019

Prof. Jungkeun Park

Syllabus

- Class
  - 3316: Real-time operating systems
- Class room / hours
  - Class room C291-2
  - 10:30~12:00 (Mon/Wed)
- Textbook
  - Lecture slides
- Grading (tentative)
  - Midterm(35), Final exam(35), Assignment (15), Attendance (10), etc (5)
- Homepage
  - Konkuk ecmapus

Course Objectives

- To introduce basic concept of RTOS
- To learn basics of real-time systems
- To practice programming using RTOS
- To learn internals of RTOS
  - Thread / Task
  - Synchronization
  - Inter-task Communication
  - Timer

Course Topics and Schedule (Tentative)

Week	Topics	Week	Topics
1	Introduction to RTOS and embedded systems	9	Time management
2	RTOS kernel	10	Timer management
3	Multitasking and real-time scheduling	11	Resource management
4	Task management	12	Synchronization
5	Scheduler and context switching	13	Message passing
6	Critical section	14	Memory management
7	Interrupt management	15	Porting RTOS
8	Midterm exam	16	Final exam

References

- Books
  - An Embedded Software Primer, David E. Simon, Addisoon Wesley
  - Real-Time Concepts for Embedded Systems, Qing Li, CMP Books (RTOS를 이용한 실시간 임베디드 시스템 디자인, 에어컨 출판사)
  - uC/OS-III The Real-Time Kernel, Jean J. Labrosse, CMP Books
- Internet materials

Suggestions

- Programming skills
- Feel free to ask any question.
- Don’t copy homework!
  - You will get minus points and the lowest grade