Embedded Operating System Phase - I

presented by

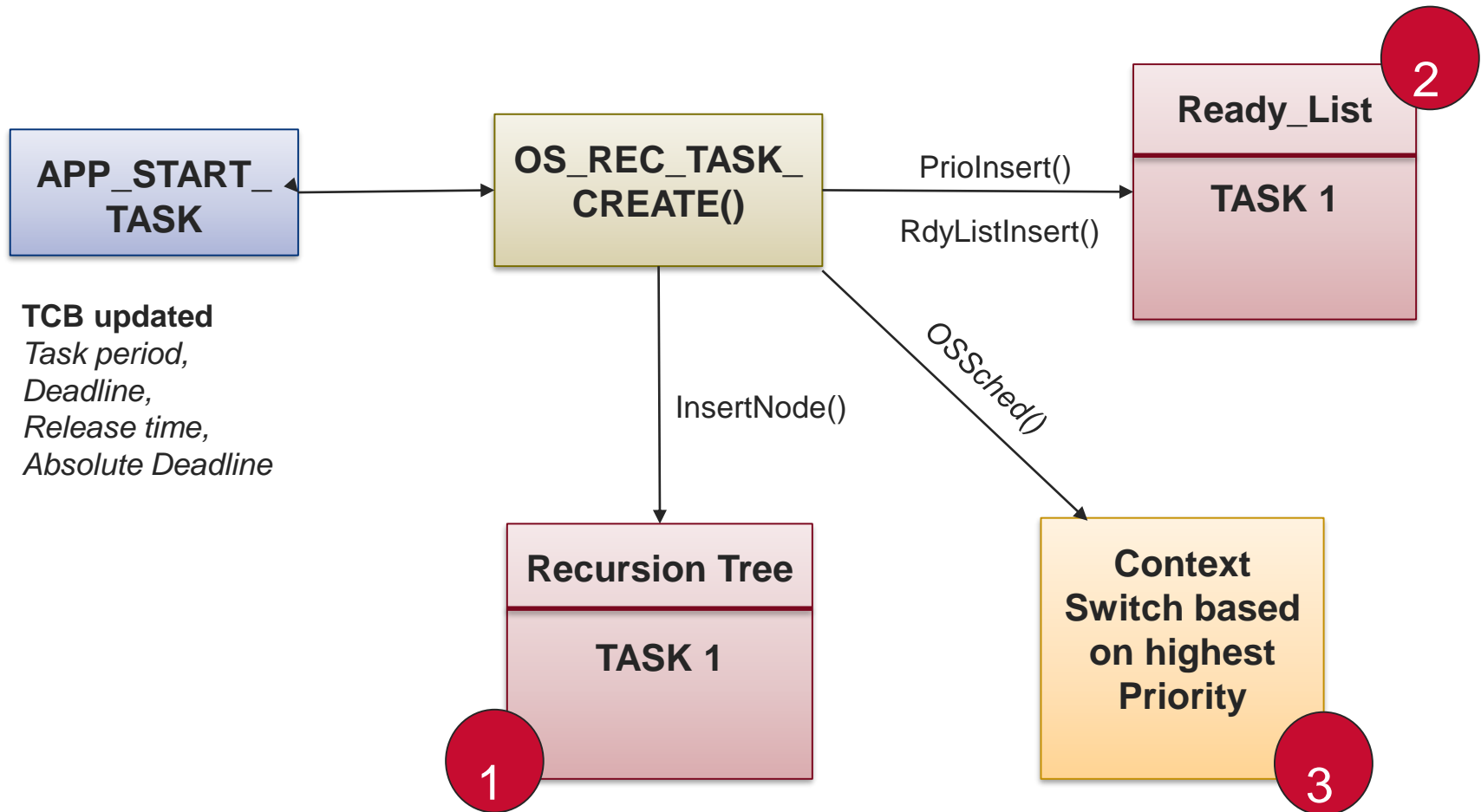**Toshniwal Priya and Sethupandi Abishek**
Student
School of Computer Science and Engineering

06/03/2017

Requirements

- Functional Requirements

- Task Recursion using Splay Tree
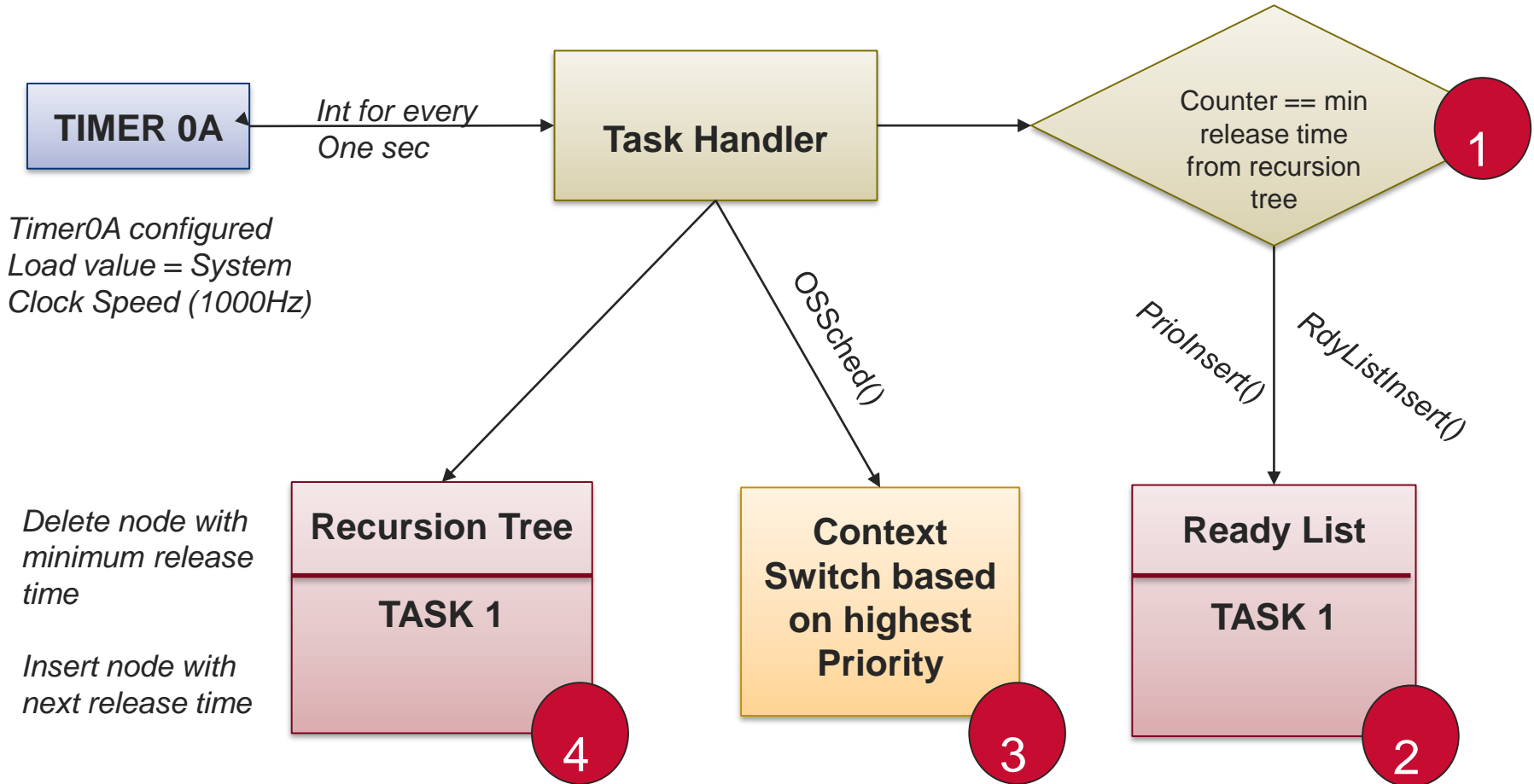
- EDF Scheduler using Binomial Heap

Task Recursion - 1

Operation 1 - Initial

Task Recursion - 2

TIMER 0A → *Int for every One sec* → **Task Handler** → Counter == min release time from recursion tree **(1)**

Timer0A configured Load value = System Clock Speed (1000Hz)

OSSched()

PrioInsert()

RdyListInsert()

Delete node with minimum release time

Insert node with next release time

Recursion Tree

TASK 1

(4)

Context Switch based on highest Priority

(3)

Ready List

TASK 1

(2)

Operation 2 – ISR

Counter Overflow

- Resetting the counter using window selection

- Window Bit – MSB of 32-bit Unsigned Integer variable

  - 0 – counter normal operation

    - Counter = Counter

  - 1 – Reset the counter

    - Counter = Counter – 0X7FFF FFFF (32 bit unsigned integer)

EDF Scheduler