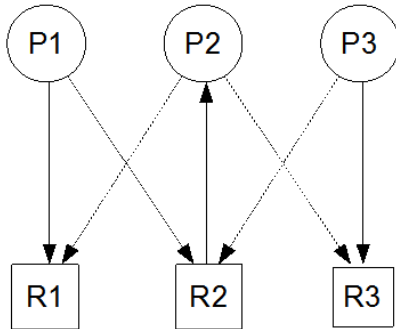


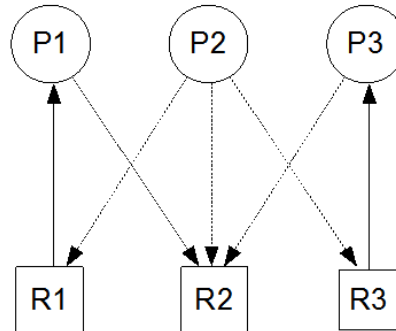
# Rešenja drugog kolokvijuma iz Operativnih sistema 2, decembar 2014.

## 1. (10 poena)

a)(5)



b)(5)



## 2. (10 poena)

```
int findBestCandidate (PCB* pcb, unsigned int modifyBit) {
    unsigned int initClockHand = pcb->clockHand;
    do {
        if (refmod(pcb->clockHand) & modmask == modifyBit) {
            if (refmod(pcb->clockHand) & refmask == 0) // If reference bit clear,
                return 1; // this is the best candidate.
            else // Reset the reference bit and give it a second chance:
                refmod(pcb->clockHand) &= ~refmask;
        }
        pcb->clockHand = next(pcb->clockHand); // Move clockHand to the next
    } while (pcb->clockHand!=initClockHand);
    return 0; // Not found
}
```

## 3. (10 poena)

```
int slab_free_slot (Cache* cache, void* slot_) {
    if (slot_==0 || cache==0) return -1; // Exception
    Slot* slot = (Slot*)slot_;
    Slab* slab = (Slab*)page_align(slot_);
    if (++slab->freeSlots==N) {
        // Slab totally free, deallocate it:
        if (slab->prev) slab->prev->next = slab->next;
        else cache->head = slab->next;
        if (slab->next) slab->next->prev = slab->prev;
        else cache->tail = slab->prev;
        free(slab);
    } else {
        // Slab still not totally free, deallocate the slot only:
        slot->prev = slab->tail;
        slot->next = 0;
        slab->tail = slot;
        if (slab->head==0) slab->head = slot;
    }
    return 1;
}
```