

Rešenja drugog kolokvijuma iz Operativnih sistema 2, Septembar 2012.

1. (10 poena)

```
int allocate (int pid, int rid) {
    if (pid>=numOfProcesses || rid>=numOfResources) return 0; // Exception!
    if (resourceAlloc[pid][rid]) return 1; // Already allocated to this proc.
    // Is this resource free?
    for (unsigned i=0; i<numOfProcesses; i++)
        if (resourceAlloc[i][rid]) return 0; // The resource is occupied
    // Deadlock prevention:
    for (i=0; i<rid; i++)
        if (resourceAlloc[pid][i]) return 0; // Cannot allocate
    // The resource can be allocated:
    resourceAlloc[pid][rid] = 1;
    return 1;
}
```

2. (10 poena) 1: BCh, 2: ECh, 3: BCh, 4: 54h. Biće izbačena stranica 4.

3. (10 poena)

```
unsigned long workingSetSize (PCB* pcb) {
    static const unsigned int mask = ~(~0U>>1); // 100...0b
    if (pcb==0) return -1; // Exception!
    unsigned long size = 0;
    for (unsigned long int i=0; i<NumOfPages; i++)
        size += ((pcb->pmt[i] & mask)!=0);
    return size;
}
```