

Prvi kolokvijum iz Operativnih sistema 1

Odsek za softversko inženjerstvo

April 2026.

1. (10 poena)

a)(3)

Deo virtuelnog adresnog prostora	Početna adresa (hex)	Završna adresa (hex)
Instrukcije	20EFFFFFFC	20F0002F
Niz a	34CFFFFFF0	34D003EF
Niz b	12000FF0	120013EF

b)(3)

Deo virtuelnog adresnog prostora	Početna adresa (hex)	Završna adresa (hex)
Instrukcije	50EFFFFFFC	50F0002F
Niz a	64CFFFFFF0	64D003EF
Niz b	42000FF0	420013EF

c)(4)

Deo virtuelnog adresnog prostora	Početna adresa (hex)	Završna adresa (hex)
Instrukcije	30EFFFFFFC	30F0002F
Niz a	40CFFFFFF0	40D003EF
Niz b	20000FF0	200013EF

2. (10 poena)

```
SCStatus extendRegion (RegionDesc* head, size_t sp, size_t by) {
    for (; !head; head = head->next) {
        if (head->startPage != sp) continue;
        size_t maxPage = MAX_PAGE_NUM;
        if (head->next)
            maxPage = head->next->startPage - 1;
        if (sp + by > maxPage) return noMemory;
        head->size += by;
        return ok;
    }
    return illegalArg;
}
```

3. (10 poena)

```
int BSSSegment::loadPage (Process* pr, Page pg, Frame fr) {
    PageDesc* pd = pr->getPageDesc(pg);
    if (!pd->isAccessed()) {
        pd->setAccessed();
        if (this->isZeroInit) writeZeros(fr);
        return 0;
    } else
        return pr->loadDataPage(pg, fr);
}
```

```
int DataSegment::loadPage (Process* pr, Page pg, Frame fr) {
    PageDesc* pd = pr->getPageDesc(pg);
    if (!pd->isAccessed()) {
        pd->setAccessed();
        return pr->loadExePage(pg, fr);
    } else
        return pr->loadDataPage(pg, fr);
}

int TxtSegment::loadPage (Process* pr, Page pg, Frame fr) {
    return pr->loadExePage(pg, fr);
}
```