

Rešenja zadataka za treći kolokvijum iz Operativnih sistema 1, septembar 2015.

1. (10 poena)

```
void putchar (IOHandle handle, char c) {
    static char buffer[BlockSize];
    static int cursor = 0;
    buffer[cursor++] = c;
    if (cursor==BlockSize) {
        writeBlock(handle,buffer);
        cursor = 0;
    }
}
```

2. (10 poena)

```
int append (int fhandle, byte* buffer, unsigned long sz) {
    int ret = 0;
    unsigned long oldSize = 0;
    ret = fgetsize(fhandle,oldSize);
    if (ret<0) return ret;
    unsigned long newSize = oldSize + sz;
    ret = fresize(fhandle,newSize);
    if (ret<0) return ret;
    ret = fmoveto(fhandle,oldSize);
    if (ret<0) return ret;
    ret = fwrite(fhandle,buffer,sz);
    return ret;
}
```

3. (10 poena)

```
unsigned extendFile (FCB* fcb, unsigned by) {
    if (fcb==0) return 0; // Exception
    // Find the first free block:
    for (unsigned free = 1; free<FATSIZE && (fat[free]!=~0U); free++);
    if (free==FATSIZE) return 0; // No free space
    // Find the file's tail block:
    unsigned tail = fcb->head;
    if (tail)
        while (fat[tail]) tail = fat[tail];
    // Extend the file:
    unsigned extendedBy = 0;
    while (1) {
        if (tail)
            fat[tail] = free;
        else
            fcb->head = free;
        tail = free;
        fat[tail] = 0;
        extendedBy++;
        if (extendedBy==by) return extendedBy;
        // Find the next free block:
        for (free++; free<FATSIZE && (fat[free]!=~0U); free++);
        if (free==FATSIZE) return extendedBy; // No more free space
    }
    return extendedBy;
}
```