

Princeton University
COS 217: Introduction to Programming Systems
Assembler Assignment
Suggestions for Creating the Text Section

```
static unsigned char *process3aMnm(
    unsigned uOp, unsigned uOp3,
    unsigned uRs1, unsigned uRs2, unsigned uRd)
{
    static struct
    {
        unsigned uOp:2;
        unsigned uRd:5;
        unsigned uOp3:6;
        unsigned uRs1:5;
        unsigned uI:1;
        unsigned uAsi:8;
        unsigned uRs2:5;
    } s;

    s.uOp = uOp;
    s.uRd = uRd;
    s.uOp3 = uOp3;
    s.uRs1 = uRs1;
    s.uI = 0;
    s.uAsi = 0;
    s.uRs2 = uRs2;
    return (unsigned char*)&s;
}
```

For the instruction `add %r1, %r2, %r3`:

```
pucSrc = process3aMnm(2, 0, 1, 2, 3);
pucDest = (psCurrentSection->obj_code) + *puiCurrentLc;
memcpy(pucDest, pucSrc, 4);
*puiCurrentLc += 4;
```

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