

IA-64 Software Pipelining

Software pipeline the loop below for the IA-64. To do this you will need to

1. initialize LC, EC, etc,
2. assign registers (both general and predicate),
3. convert from 'C6000 instructions to IA-64 instructions (see class example).

Assume the loop is executed 6 times.

```
loop:
    ldh    *a_m++, a
    ldh    *b_m++, b
    add    a, b, c
    mpy    c, prod, prod
[i]      sub    i, 1, i
[i]      b      loop
```

Work this problem two ways. The first way assumes the results of each instruction appears the next cycle. The second way assumes that the load have the same delay that the 'C6000 has (i.e. 4 nops after a load).