# ASM Examples

- `sum`

- `swap`

- `max`

- `mult` with loop

- `loop2`

  The first check `jge 24` is saying if `%eax` is greater than or equal to `%edi`. But remember we set `%eax` to 0 a few lines before. We are really checking whether 0 is greater than or equal to `%edi` ... if `%edi` less than or equal to 0. If $n \leq 0$, we return 0.

  In the nested loop, we see `%ecx` $= 4i$. Then, depending on the $j$ iteration, we add $j$. We have the addition pattern

  ```
  4    8    12       j = 0
       8+2  12 + 2  j = 1
            12 + 4  j = 2
  ```

  We have $4i + 2j$.