Master



```
while true
for k = 1, 2, 3, ...
   flag = COMPUTE OBJ
                                                mpi sync!(flag)
   mpi sync!(flag)
                                                if (flag==COMPUTE OBJ)
   f = compute objective function(x) <
                                                  compute objective function(x)
                                                elseif (flag==COMPUTE GRAD)
   flag = COMPUTE GRAD
                                                  compute gradient(x)
   mpi sync!(flag)
                                                else
   dx = compute_gradient(x)
                                                   break
                                                end
   x = x - alpha * dx
                                             end
flag = OPTIMIZATION STOP
mpi sync!(flag)
```