```matlab
%Matlab code for finding prime

clear all
close all

%finding primes upto n
n=60000;
A=1:60000;
[prime,output]=listprimes(n);
fprintf('for n=%d\n',n)
vv=find(output>0);
fprintf('6000 th prime is %d\n',A(vv(6000)))

%function for finding prime
function [prime,output]=listprimes(n)
    A=1:n;
    k=2;

    while k<=sqrt(n)
        c=k+k:k:n;
        for jj=1:length(c)
            A(c(jj))=0;
        end

        CC=find(A~=0);
        dd=find(CC>k);
        k=CC(dd(1));

    end
    A(1)=0;
    prime=A;
    prime(prime==0) = [];

    output=A;
    output(find(output>0))=1;

end

%%%%%%%%%%%%%%%%% End of Code %%%%%%%%%%%%%%%%%%

for n=60000
6000 th prime is 59359
```

Published with MATLAB® R2018a