```matlab
% Write a script that generates a fat tree topology graph and
% finds all paths connecting a given source ToR and a given
% destination ToR. Find also all disjoint paths.
n = 6;
nservers = n*(n/2)^2;
nedge = n/2*n;
naggregation = n/2*n;
ncore = (n/2)^2;
npods = n;
ntot = [nservers,nedge,naggregation,ncore];
A = eye(sum(ntot));
serv = 1;
edge = nservers+1;
agg = nservers+nedge+1;

% Pods
for p = 1:npods
    for i = 1:n/2
        for j = 1:n/2
            % servers - edge
            A(serv,edge) = 1;
            A(edge, serv) = 1;
            serv = serv+1;
        end
        for k = 1:n/2
            % edge - aggregation
            A(edge,agg) = 1;
            A(agg, edge) = 1;
            agg = agg+1;
        end
        edge = edge+1;
        agg = agg-n/2;
    end
    agg = agg+n/2;
end
% Core
agg = nservers+nedge+1;
core = nservers+nedge+naggregation+1;
for p = 1:npods
    for i = 1:n/2
        for j = 1:n/2
            A(agg,core) = 1;
            A(core,agg) = 1;
            core = core+1;
        end
        agg = agg+1;
    end
    core = nservers+nedge+naggregation+1;
end




% plot1
nlevels = 4;
k = 1;
x = zeros(sum(ntot),1);
y = zeros(sum(ntot),1);
for i = 1:nlevels
    for j = 1:ntot(i)
        y(k) = (i)/(nlevels+1);
        x(k) = (j)/(ntot(i)+1);
        k = k+1;
    end
end
figure
gplot(A, [x y],'-k*');
set(gca,'XTick',[],'YTick',[])
title('Fat-Tree Topology','Color','k','fontsize', 18)
axis([-0.25 1.05 0.12 0.85])
text (-0.22,0.2,'Servers','Color',[0 0.5 0.6],'fontsize', 11)
text (-0.22,0.4,'Edge','Color',[0 0.5 0.6],'fontsize', 11)
text (-0.22,0.6,'Aggregation','Color',[0 0.5 0.6],'fontsize', 11)
text (-0.22,0.8,'Core','Color',[0 0.5 0.6],'fontsize', 11)
for i = 0:n-1
    text (i/n,0.17,'Pod','Color',[0 0.5 0.6],'fontsize', 11)
end
% plot2
nlevels = 4;
k = 1;
x = zeros(sum(ntot),1);
y = zeros(sum(ntot),1);
t = zeros(sum(ntot),1);
for i = 1:nlevels
    for j = 1:ntot(i)
```

```matlab
        x(k) = (nlevels-i+0.2)*sin(j*(2*pi)/(ntot(i)));
        y(k) = (nlevels-i+0.2)*cos(j*(2*pi)/(ntot(i)));
        k = k+1;
    end
end
figure
gplot(A, [x y],'-k*')
set(gca,'XTick',[],'YTick',[])
title('Fat-Tree Topology','Color','k','fontsize', 18)
```