Handout #31

```
function D=addmat(A,B,C)

%ADDMAT Direct Stiffness matix assembly
% D=addmat(A,B,C)
% A = the larger matrix into which the elements of the smaller
%     matrix will be added
% B = the smaller matrix whose elements are to be added into
%     specific loactions in the larger matrix
% C = row vector whose elements correspond to the
%     row (and column) of matrix A into which row (and column)
%     of matrix B are to be added
% D = the resulting matrix of A <- B

% Checks on compatibility
[nra,nka]=size(A);
[nrb,nkb]=size(B);
[nrc,nkc]=size(C);
if nrb > nra
    disp('Error in addmat, dimensions of B larger than A')
    return
end
if nkc ~= nrb
    disp('Error in addmat, dimensions of C not compatible with B')
    return
end
%
D=A;
for ii = 1:nkc
    i = C(ii);
    for jj = 1:nkc
        j = C(jj);
        D(i,j) = A(i,j) + B(ii,jj);
    end
end
```