

```
function [y_hat,z] = projection(y,u)

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% Name: Cole Rottenberg      %
% UF ID: 1106-2528          %
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% This function determines (write the purpose of the function here)
% Input arguments: (indicate the input arguments here)
% Output argument: (indicate the output arguments here)
%

y_hat = (dot(y,u)/dot(u,u))*u ;
z = y - y_hat;
end
```