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function [B_zn,S_zn] = Eval_ShapeFn(order)
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% $Code Version: 1.0$
% Shape Functions attached to each node of the element and its
% corresponding Gradients with respect to \zeta and \eta
% Inputs : order - order of polynomial to generate shape functions for
% Outputs: B_zn - [N1,zeta N2,zeta N3,zeta N4,zeta]
%               [N1,eta N2,eta N3,eta N4,eta ]
%               evaluated at each integral point - [2x4x4] array
%       S_zn - [N1 N2 N3 N4]
%              [N1 N2 N3 N4]
%              evaluated at each integral point - [2x4x4] array

[ShapeFn,DShapeFn] = H1_FECollection(order);
[Quad_pts,~] = IntRules();
num_IntPts = length(Quad_pts);
[dim,n] = size(DShapeFn);
B_zn = zeros(dim,n,num_IntPts);
S_zn = zeros(dim,n,num_IntPts);

for i=1:dim
    for j=1:n
        B_zn(i,j,:) = DShapeFn{i,j}(Quad_pts(:,1),Quad_pts(:,2)); % 2D
        S_zn(i,j,:) = ShapeFn{j}(Quad_pts(:,1),Quad_pts(:,2)); %2D
    end
end

end

```

