```
function flux = Calc_Flux(ShapeFn,GridPt,par)
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% $Code Version: 1.0$
% This function computes the flux values at the integration points on the
% global coordinate system.
% Inputs : ShapeFn  - Shape Function evaluated at integration points
%          GridPt   - global Grid Location of the nodes of the element
%          par      - parameter determining the dynamic equation
% Outputs: flux     - flux values computed at integration points

    % Function that calculates the -flux values at all integration points
    [dim,n,num_Int] = size(ShapeFn);
    flux = zeros(dim,n,num_Int);

    for i=1:num_Int
        x = ShapeFn(1,:,i)*GridPt;
        flux(1,:,i) = -x(2);
        flux(2,:,i) = x(1) - par*(1 - x(1)^2)*x(2);
    end

end
```

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