```
function beta = calcObliqueAngle(theta, mach, gamma, useDeg)
% Created by Thomas Satterly
% Solves for the mach angle of an oblique shock wave withing 0.0001
 radians

% If inputs were selected in degrees, convert to radians
if (useDeg == 1)
 theta = deg2rad(theta);
end

% Define start condition
betaStart = 0;

% Iterate over accuracy from 1e-1 to 1e-10
for i = 1:6
 step = 1 / (10^i);
 beta = nestedSolve(betaStart);
 betaStart = beta - step;
end

% If inputs were selected in degrees, convert back to degrees
if (useDeg == 1)
 beta = rad2deg(beta);
end

% Nested accelerated solver
 function beta = nestedSolve(startAt)
  beta = startAt;
  guess = -inf;
  while (guess < tan(theta))
   beta = beta + step;
   guess = 2 * cot(beta) * ((((mach^2) * (sin(beta)^2)) - 1) /
 (((mach^2) * (gamma + cos(2 * beta))) + 2));
  end
 end

end
```

```
Not enough input arguments.

Error in calcObliqueAngle (line 6)
if (useDeg == 1)
```

Published with MATLAB® R2015b