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% Christopher Brant  ENGR 1410-625  2/4/16
% Assignment A6 Part A

function[Q, V] = ThermE(m, T, Cp);

% Set universal variables
DenW = 1000;      %[kg/m^3]

% Properties of Glycerol
CpG = 2400;       %[J/(kg * K)]
SGG = 1.261;      %[unitless]

TempFahrenheitC = (75 - 32) * (5 / 9);
DeltaTG = 50 - TempFahrenheitC;      % Finds delta T of the glycerol

% Perform conversions and calculations for Q
DeltaTM = T - 50;
M = m / 1000;
Q = M * Cp * DeltaTM;

% Perform conversions and calculations for V
LperGal = 3.78541178;
LperMCUBE = 1000;
MG = Q / (CpG * DeltaTG);
Density = SGG * DenW;
Vol = MG / Density;
V = (Vol * LperMCUBE) / LperGal;
```

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