## Ex:

Write a script file that makes a 3-D lit-surface plot (using meshgrid( )) with interpolated shading of the following function:

$$
\begin{aligned}
& z=\ln \left(1+\frac{1}{2} x+\frac{1}{2} \cos ^{2}(2 \pi y)\right) \\
& 0 \leq x \leq 1(9 \text { pts distributed uniformly between } 0 \text { and } 1) \\
& 0 \leq y \leq 2(13 \text { pts distributed uniformly between } 0 \text { and } 2)
\end{aligned}
$$

SoL'N: $\quad[x x, y y]=\operatorname{meshgrid}(0: 1 / 8: 1,0: 1 / 6: 2) ;$

$$
\begin{aligned}
& \mathrm{zz}=\log \left(1+1 / 2 * \mathrm{xx}+1 / 2 * \cos (2 * \mathrm{pi} * \mathrm{yy}) .^{\wedge} 2\right) \\
& \operatorname{surfl}(\mathrm{xx}, \mathrm{yy}, \mathrm{zz})
\end{aligned}
$$

shading interp

