Write a MATLAB program to determine response of the LTI s/m whose impulse response is h(t)=2e^-3t u(t) for the input is x(t)=2e^-5t u(t), using fourier transform

>> syms t;

f1=2\*exp(-3\*t).\*heaviside(t);

x=fourier(f1)

f2=2\*exp(-5\*t).\*heaviside(t);

y=fourier(f2)

z=x\*y;

x1=ifourier(z)

x =

2/(w\*i + 3)

y =

2/(w\*i + 5)

x1 =

(4\*pi\*exp(-3\*x)\*heaviside(x) - 4\*pi\*exp(-5\*x)\*heaviside(x))/(2\*pi)

>>

