```matlab
% Load data file and define important parameters
load('dt_file2.mat');
x = x(1:50000);
Ts = 1/Fs;
n = 0:(length(x)-1);
times = n*Ts;
% Create an array of 'continuous' times
Fsc = 441000;
Tsc = 1/Fsc;
L = Fsc/Fs;
t = linspace(0,times(end),length(x)*L);
% Create an array of ideally interpolated x-values
xinterp = zeros(1,length(t));
for N = 1:length(t)
    xinterp(N) = sum(x.*sinc((t(N)-n*Ts)/Ts));
end
% Create an array of sample-and-hold values
xheld = zeros(1,length(t));
Ntemp = 1;
for ntemp = 1:length(x)
    while Ntemp*Tsc < ntemp*Ts
        xheld(Ntemp) = x(ntemp);
        Ntemp = Ntemp + 1;
    end
end
filterCoeff = fir1(100,1/L);
xpractical = conv(xheld,filterCoeff);
% Plot everything in one gorgeous graphic
f = figure;
p = uipanel('Parent',f,'BorderType','none');
p.Title = 'Plots for dt_file2';
p.TitlePosition = 'centertop';
p.FontSize = 12;
p.FontWeight = 'bold';

ax1 = subplot(2,2,1,'Parent',p);
plot(ax1,times,x);
title(ax1,'x vs t');
ylabel(ax1,'x[n] = x(n*Ts)');
xlabel(ax1,'t');

ax2 = subplot(2,2,2,'Parent',p);
plot(ax2,t,xinterp);
title(ax2,'x ideally interpolated vs t');
ylabel(ax2,'x(t)');
xlabel(ax2,'t');

ax3 = subplot(2,2,3,'Parent',p);
plot(ax3,t,xpractical(1:length(t)));
title(ax3,'x interpolated with the sample and hold method' );
```

```matlab
ylabel(ax3,'x(t)');
xlabel(ax3,'t');

ax4 = subplot(2,2,4,'Parent',p);
plot(ax4,times((length(x)-10):end),x((length(x)-10):end), '*',t((length(t)-(10*L)):↙
length(t)),xinterp((length(t)-(10*L)):length(t)), '-',t((length(t)-(10*L)):length(t)), ↙
xpractical((length(t)-(10*L)):length(t)), '--');
title(ax4,'x and its interpolations over the last 10 samples of x' );
ylabel(ax4,'x(t)');
xlabel(ax4,'t');
legend(ax4,'x[n]','x sinc interp','x sample/hold interp');
```