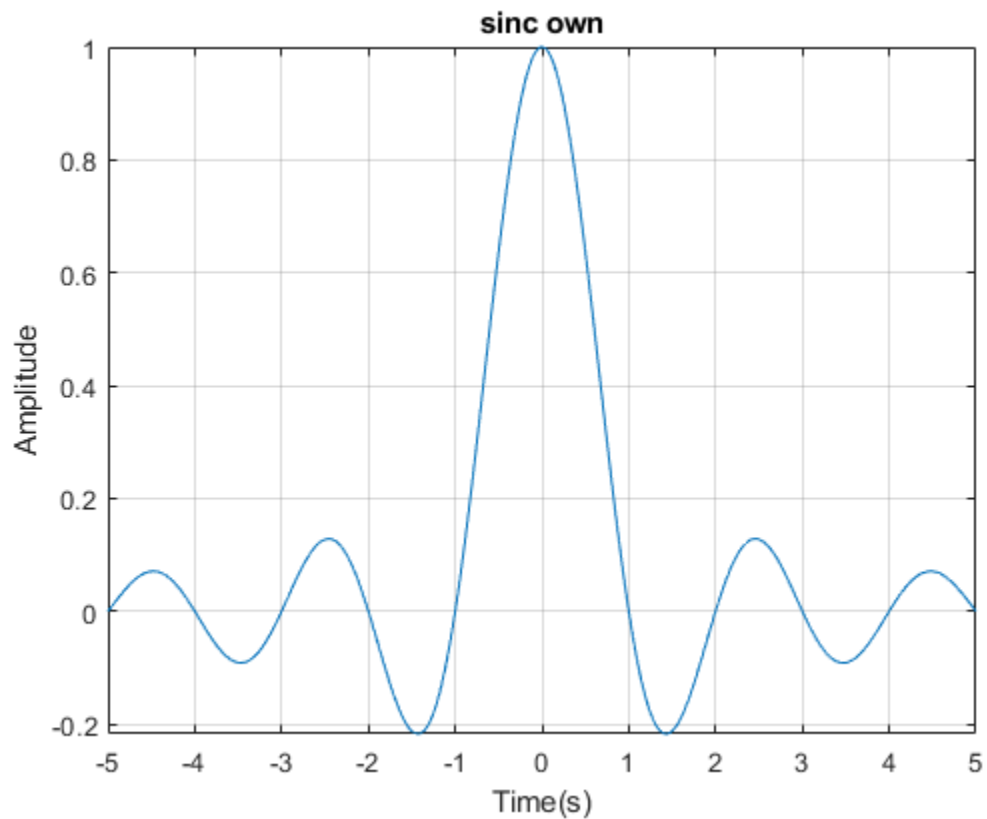

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Task a)

Write your own sinc function called 'sinc_own' to the end of the script and plot it using time vector 't_a' to figure(1)

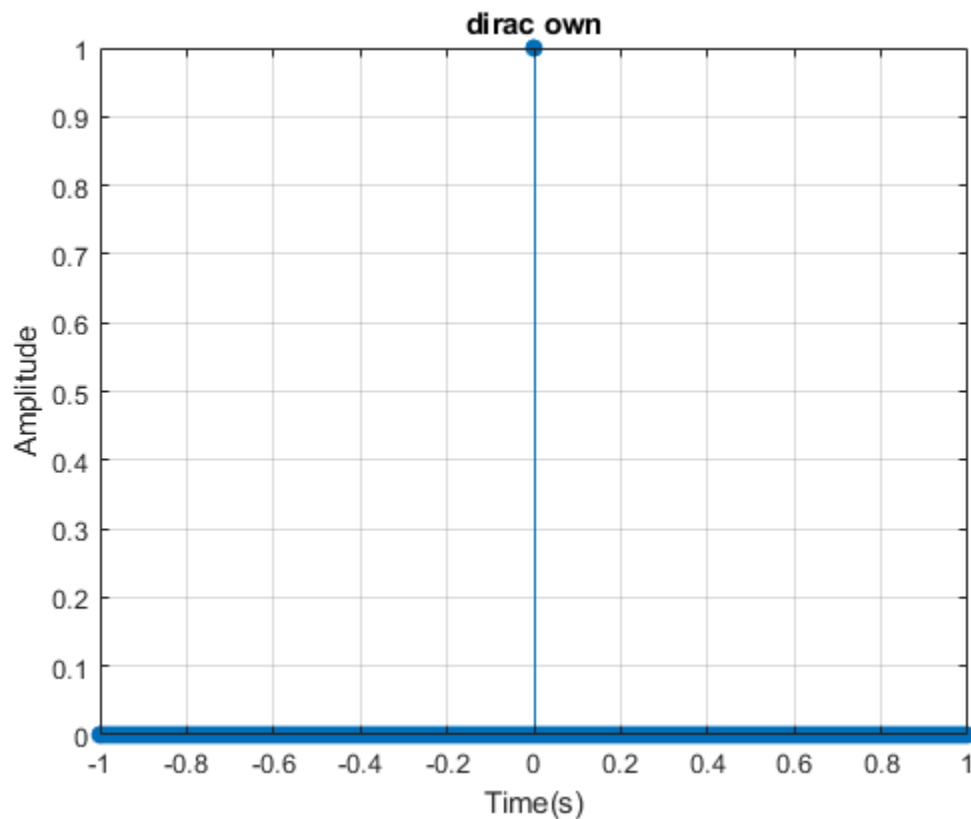
```
fs = 8000;  
t_a = (-5*fs:5*fs)/fs; % Time vector from -5s to 5s  
  
x_a = sinc_own(t_a);  
  
figure(1)  
plot(t_a, x_a), grid on, xlabel('Time(s)'), ylabel('Amplitude'),  
axis([-5 5 min(x_a) max(x_a)])  
title('sinc own')
```

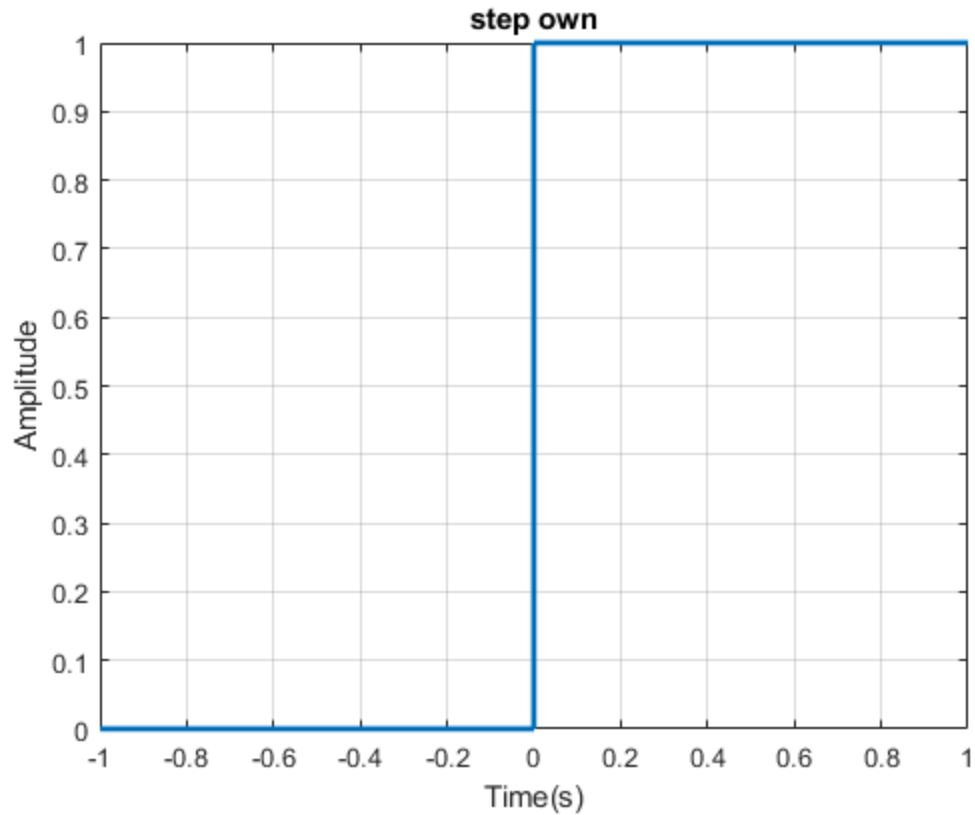


Task b)

Write your own digital diracs delta funktion and digital step function at the end of this script. Then use stem() to draw your own diracs delta function and plot() for your step function.

```
fs = 8000;  
t_b = (-fs:fs)/fs; %Time vector from -1s to 1s  
  
x_b1 = dirac_own(t_b);  
x_b2 = step_own(t_b);  
  
figure(2);  
stem(t_b,x_b1,'fill');grid on;  
xlabel('Time(s)');ylabel('Amplitude');title('dirac own');  
  
figure(3);  
plot(t_b,x_b2,'linewidth',2);grid on;  
xlabel('Time(s)');ylabel('Amplitude');title('step own');
```





Functions here

```
function y = sinc_own(x)
    l = length(x);
    y = sin(pi * x) ./ (pi * x);
    y((l + 1) / 2) = 1;
end
```

```
function y = dirac_own(x)
    y = 1 * (x == 0);
end
```

```
function y = step_own(x)
    y = 1 * (x >= 0);
end
```

Published with MATLAB® R2020a