Notebook Screen Capture

Create Two Step Sequences

The module ssd (file ssd.py) contains the function `ssd.dstep(n)` which produces a step function output using the index vector `n` as the input that turns on at `n = 0`. If you input `n-5` the step will now turn on at `n=5`.

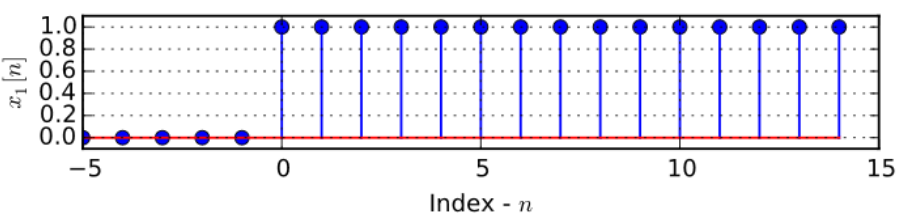
```
n = arange(-5, 15)
x1 = ssd.dstep(n) # step turns on at n = 0
x2 = ssd.dstep(n-5) # Step turns on at n = 5
```

Plot Waveforms using the Stem function

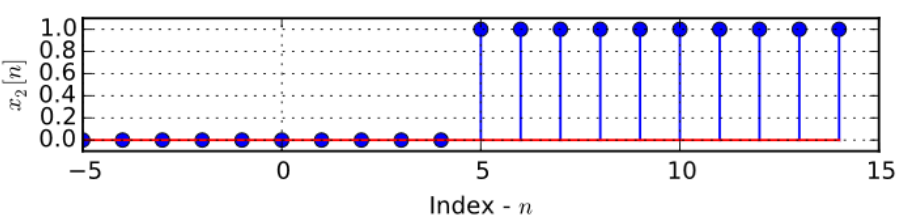
Create a 3x1 array subplots. The first two contain $x_1[n] = u[n]$ and $x_2[n] = u[n-5]$ respectively. The third plot is the difference of the first minus the second, i.e., $x_1[n] - x_2[n] = u[n] - u[n-5]$, which should be a rectangular pulse of duration five samples starting at $n = 0$.

```
figure(figsize=(6, 1.0))
stem(n, x1)
grid()
axis([-5, 15, -.1, 1.1])
xlabel(r'Index - $n$')
ylabel(r'$x_1[n]$')
```

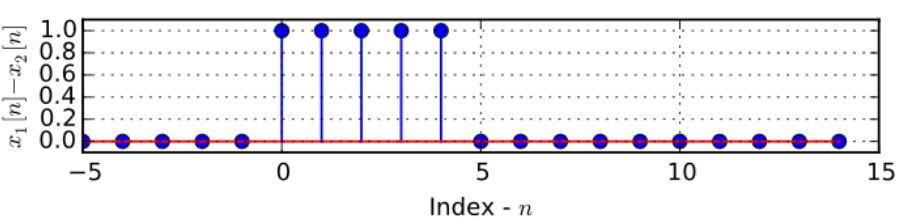
(...Repeat for two more plots)



$u[n]$



$u[n-5]$



$u[n]-u[n-5]$

As expected you see in plot 3 a pulse sequence of five samples starting at $n = 0$.