HW2 Problem 1: PRN generation

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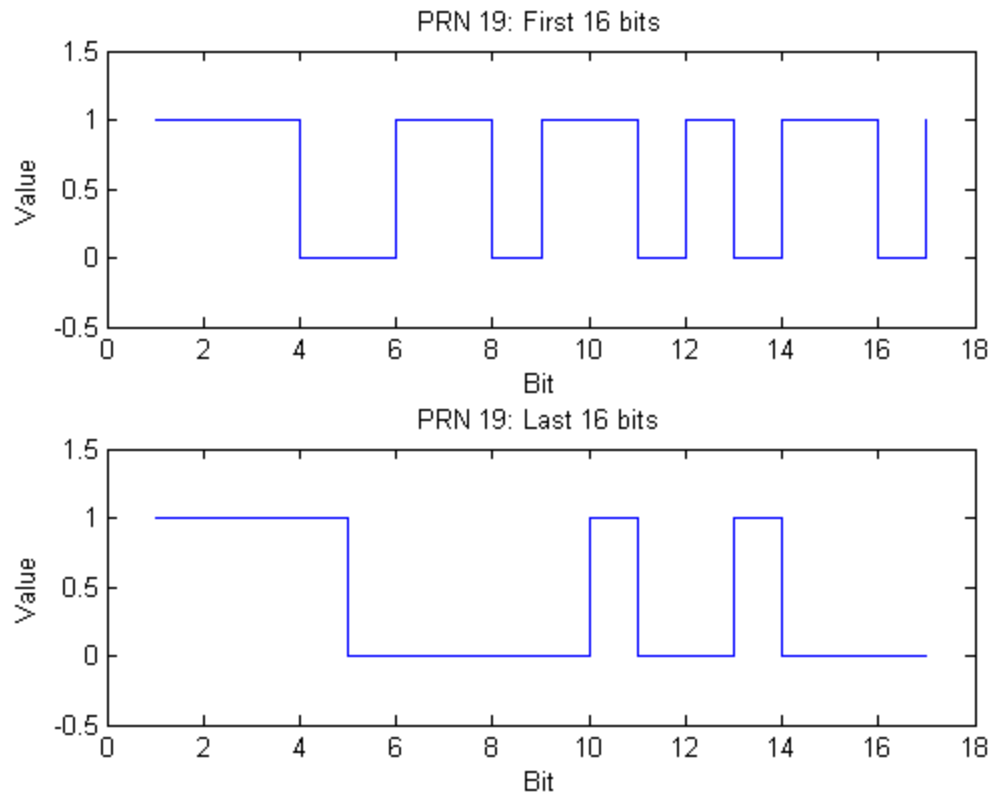# Initialize

```
fprintf('\n');
clearvars -except function_list pub_opt
close all
```

a) Plot PRN 19 chips

```
prn19=PRNCode(19);
for i = 1:1023
prn19.update()
end

binaryVectorToHex((prn19.CA_code(1:16)))
hexToBinaryVector('E6D6');
hw2_code_plot(prn19)
```

> *C:\Users\John\Documents\ASEN5090_GNSS\tools\PRNCode*
> *C:\Users\John\Documents\ASEN5090_GNSS\tools\BitShiftRegister*
>
> *ans =*
>
> *E6D6*
>
> *C:\Users\John\Documents\ASEN5090_GNSS\Homework\HW2\hw2_code_plot*

PRN 19: First 16 bits

PRN 19: Last 16 bits

b) PRN 19 chips 1024:2046

These chips are the same as 1:1023

```
for i = 1:1023
prn19.update()
end

sum(prn19.CA_code(1:1023)-prn19.CA_code(1024:end))
```
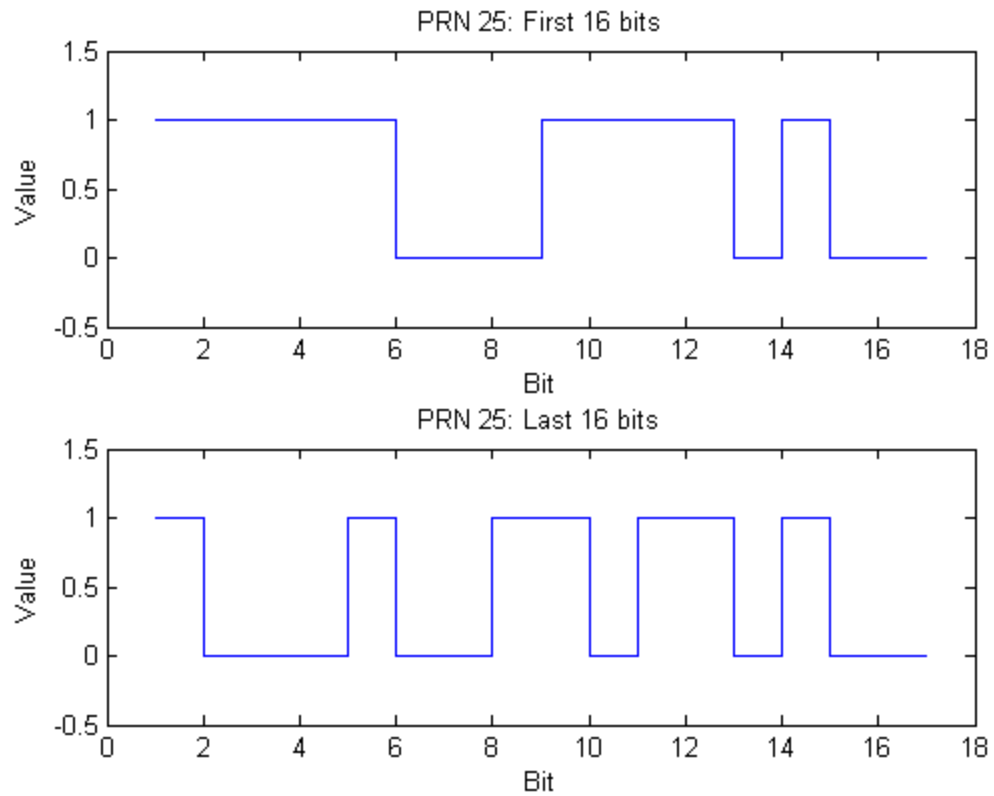
ans =

0

c) Plot PRN 25 chips

```
prn25=PRNCode(25);
for i = 1:1023
prn25.update()
end

hw2_code_plot(prn25)
```
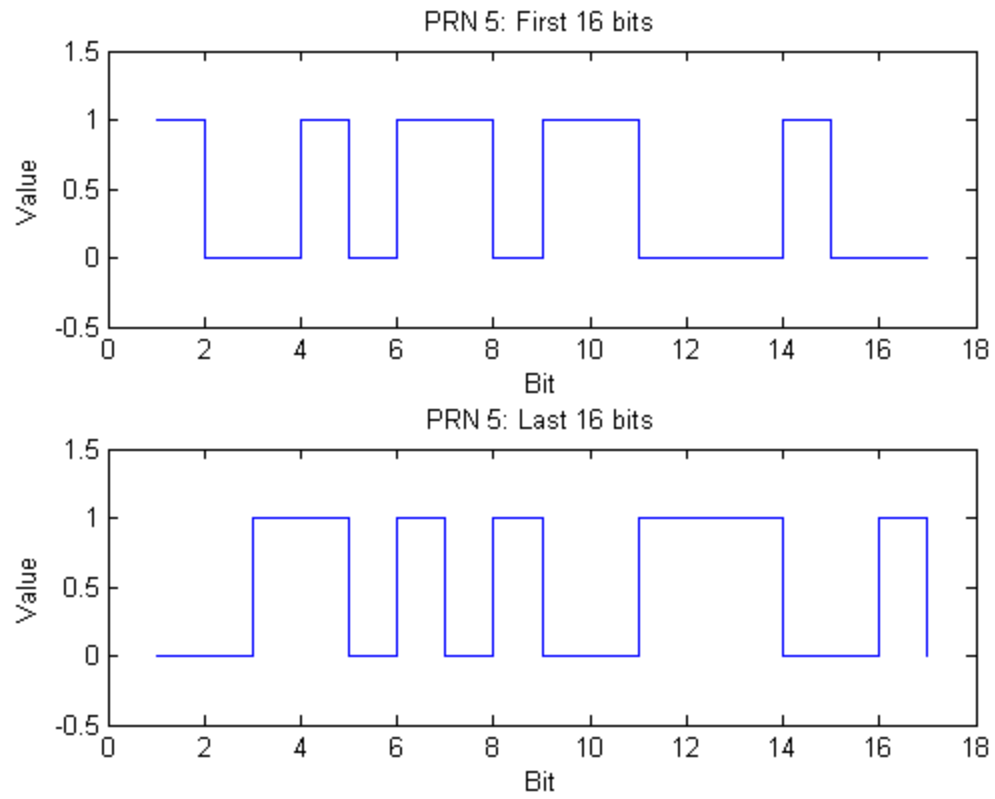
PRN 25: First 16 bits

PRN 25: Last 16 bits

d) Plot PRN 5 chips

```
prn5=PRNCode(5);
for i = 1:1023
prn5.update()
end

hw2_code_plot(prn5)
```

PRN 5: First 16 bits

PRN 5: Last 16 bits

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