Exercise: Control structures

Use the for and if structures to define a piecewise function. The function is given as:

$x = -1$ for $x < 3 - \pi$, $\cos(x)$ for $-3\pi < x < 4\pi$, 1 for $x > 4\pi$

The function should be evaluated on the interval -5π to 5π.

```
x=[-5*pi:0.1:5*pi];
f=zeros(length(x),1);
```

```
for n=1:length(x)
    if x(n) < -3*pi
        f(n)=-1;
    elseif x(n)>4*pi
        f(n)=1;
    else
        f(n)=cos(x(n));
    end
end
```

Plot the function to verify your result

```
plot(x,f)
```