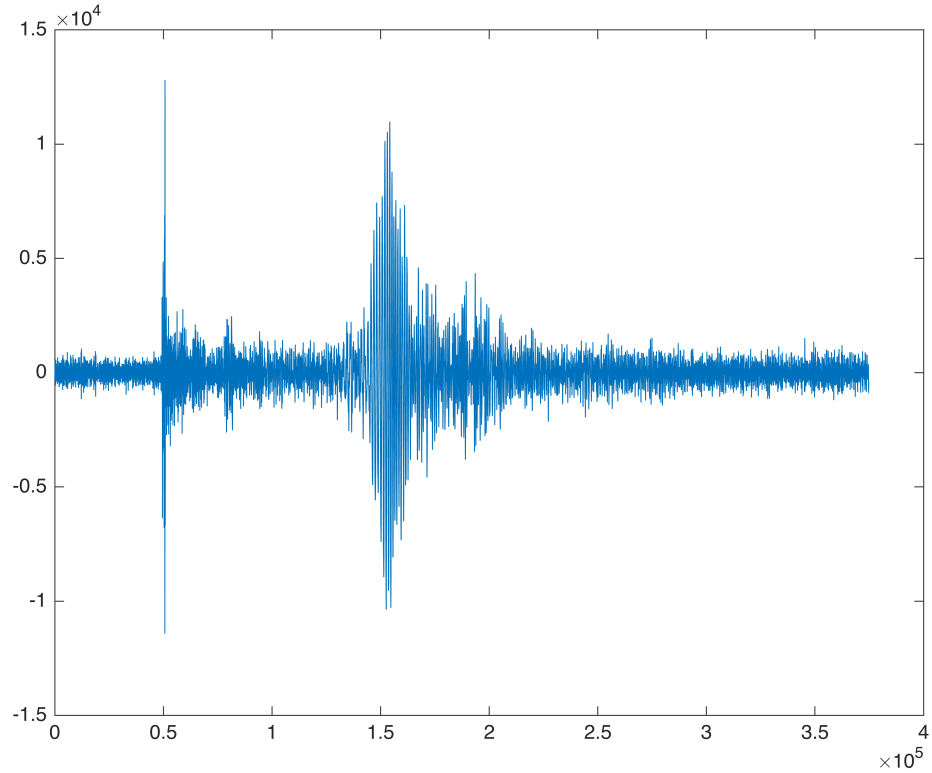
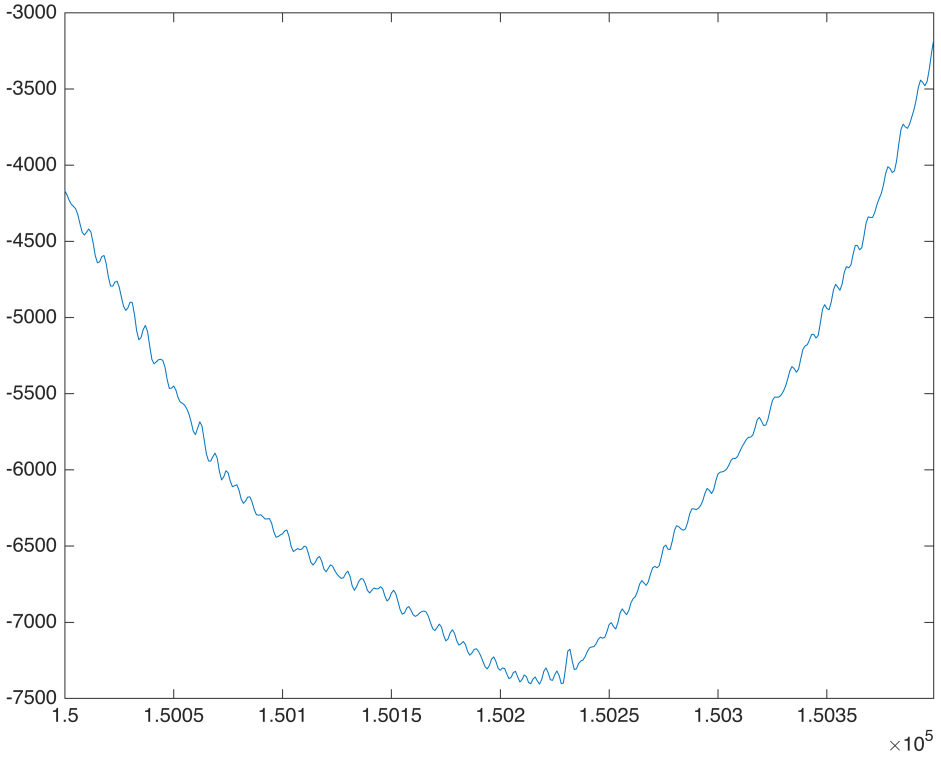

×10^4
1.5
1
0.5
0
-0.5
-1
-1.5
0
0.5
1
1.5
2
2.5
3
3.5
4
×10^5


-3000
-3500
-4000
-4500
-5000
-5500
-6000
-6500
-7000
-7500
1.5
1.5005
1.501
1.5015
1.502
1.5025
1.503
1.5035
×10^5

```
ans = 5×1
    0.5000
```

```
    1.5000
    1.5000
         0
   -0.5000
ans = 4×1
    1.5000
    1.5000
         0
   -0.5000
```

## Exercise 4 - Basic Data Analysis

**a)**

```
fn = "data.h5";
info = h5info(fn);
group_name = info.Groups.Name;
ds_name = info . Groups . Datasets .Name;
data = h5read(fn , [group_name '/' ds_name]);
```

```
plot(data)
```

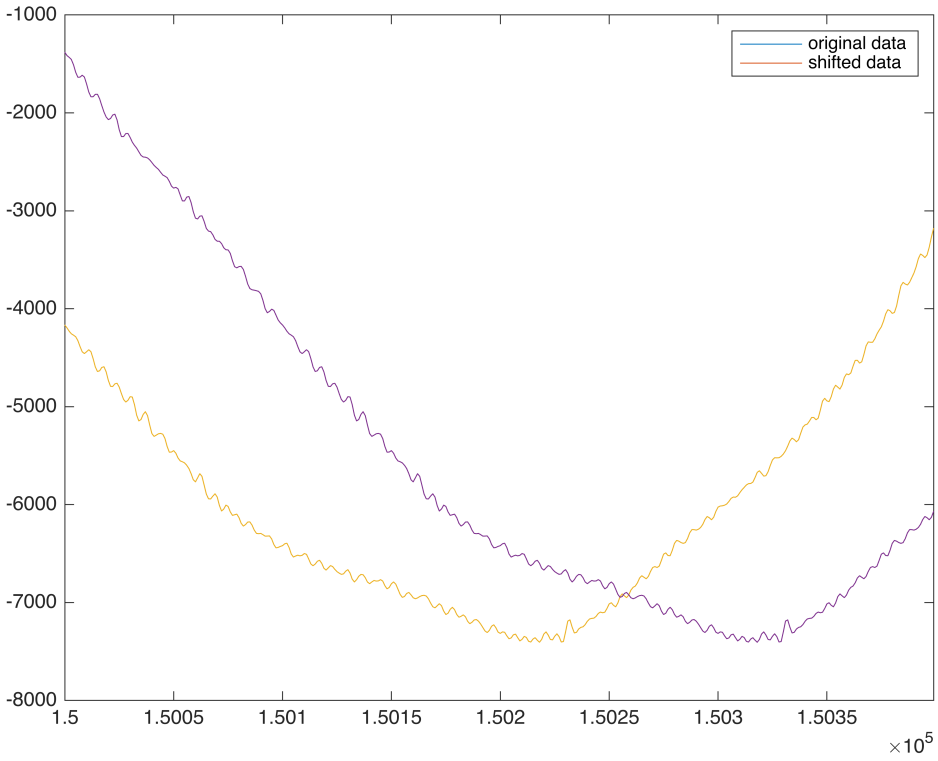
**b)**

```
n_start = 1.5*10^5;
n_end = n_start + 400;
plot(data)
xlim([n_start, n_end-1])
```

**c)**

```
pad = zeros([100 1]);
shifted_data = [pad; data];

hold("on");
plot(data)
plot(shifted_data)
xlim([n_start, n_end-1])
hold("off");
legend("original data", "shifted data");
```


original data
shifted data
-1000
-2000
-3000
-4000
-5000
-6000
-7000
-8000
1.5
1.5005
1.501
1.5015
1.502
1.5025
1.503
1.5035
×10^5