

```
##### Epidemiology class HMK 3 #####
```

```
## Use previous scripts for:
```

```
## 1. plotting with lines
```

```
## 2. linear regression models and output
```

```
## 3. ANOVA output
```

```
## 4. plotting residuals
```

```
## 5. plotting alternative models (logit, etc.)
```

```
getwd()
```

```
setwd("C:/Users/Basima/Documents/Classes/Epidemiology/HMK3")
```

```
getwd()
```

```
## The only new script introduced here is for spatial autocorrelation
```

```
ex1 <- read.table("ex1.txt")
```

```
#Examples with different correlation patterns
```

```
ex2 <- read.table("ex2.txt")
```

```
acf(ex1)
```

```
#This will plot the autocorrelogram
```

```
acf(ex2)
```

```
#it shows the 95% CI for each lag (aka. distance)
```

```
acf(ex1)$acf
```

```
#This will show you the values for the autocorrelation
```

```
acf(ex2)$acf
```

```
#Note: the [1,] is the self-correlation (lag 0) and will always be 1.0
```

```
#the [2,] is the correlation with lag 1 (aka. the 1st order)
```

**No more code below, this is the data used for ex1 and ex2**

Ex. 1 data

1

2

3

4

6

8

10  
15  
11  
8  
5  
1  
1  
1  
1  
4  
7  
8  
10  
13  
1  
2  
3  
4  
6  
8  
10  
15  
11  
8  
5  
1  
1  
1  
1  
4  
7

8  
10  
13  
1  
2  
3  
4  
6  
8  
10  
15  
11  
8  
5  
1  
1  
1  
1  
4  
7  
8  
10  
13  
1  
2  
3  
4  
6  
8  
10  
15

11  
8  
5  
1  
1  
1  
1  
4  
7  
8  
10  
13

Ex. 2 data

14  
8  
2  
79  
14  
0  
82  
46  
46  
99  
23  
14  
75  
14  
75  
14

75  
14  
75  
3  
14  
8  
2  
79  
14  
0  
82  
46  
46  
99  
23  
14  
75  
14  
75  
14  
75  
14  
75  
14  
75  
3  
14  
8  
2  
79  
14  
0  
82

46  
46  
99  
23  
14  
75  
14  
75  
14  
75  
14  
75  
3  
14  
8  
2  
79  
14  
0  
82  
46  
46  
99  
23  
14  
75  
14  
75  
14  
75  
14

75

3