from Chris Chatfield, author of "The Analysis of Time Series, An Introduction".

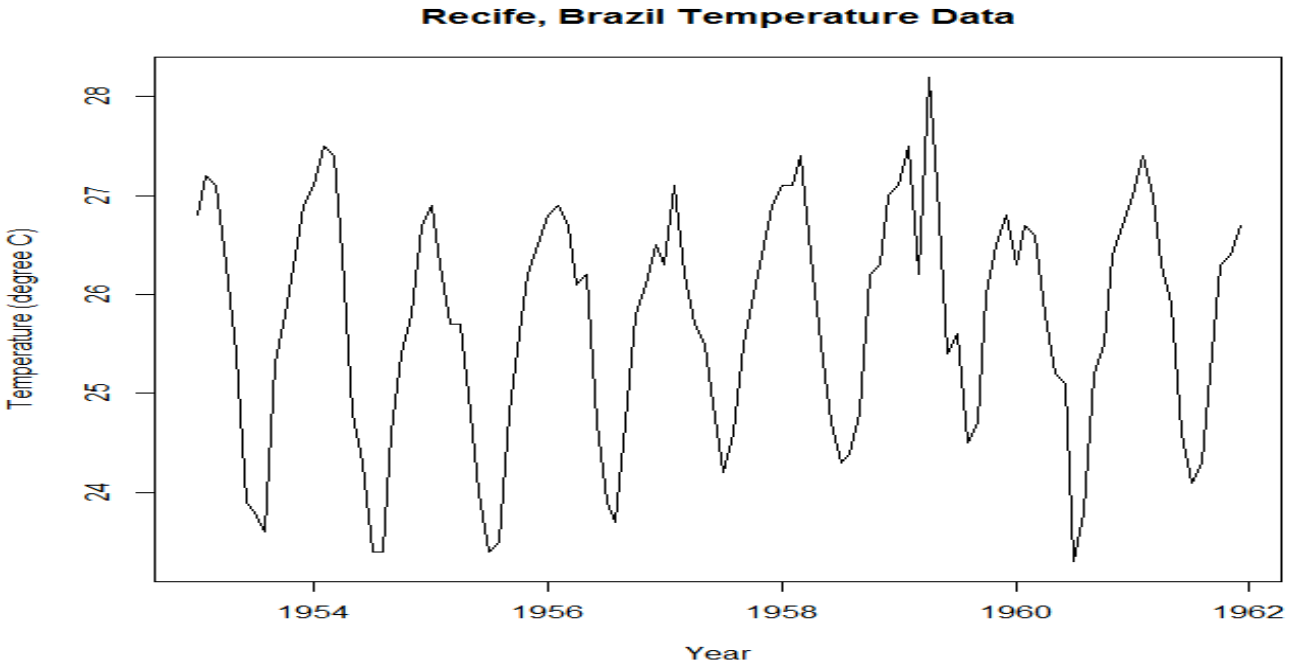
Example. Monthly Air Temperature at Recife

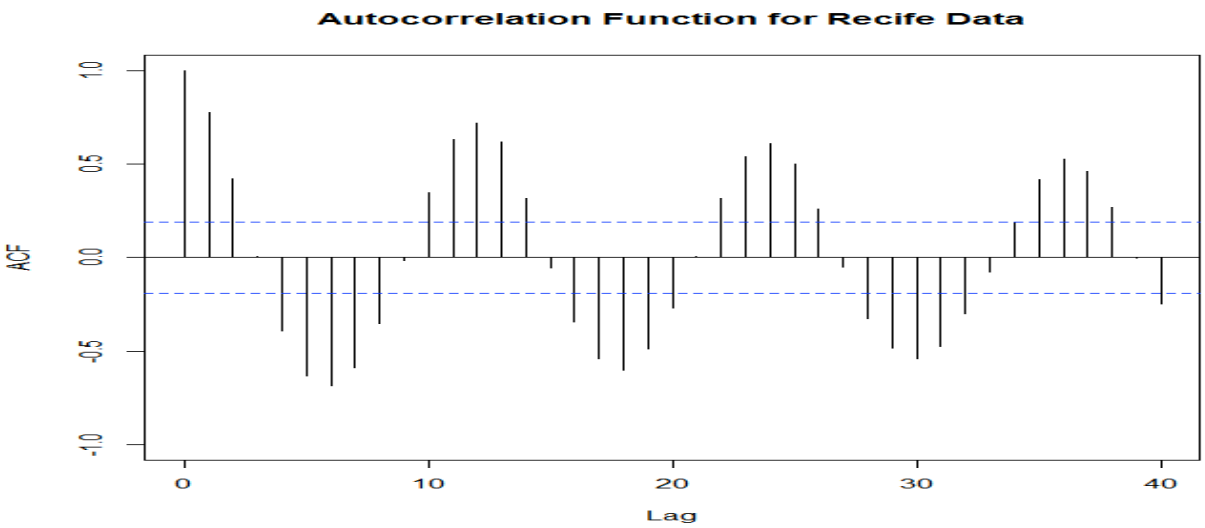
The plot exhibits regular seasonal variation with little or no trend.

The correlogram is produced using the R command:

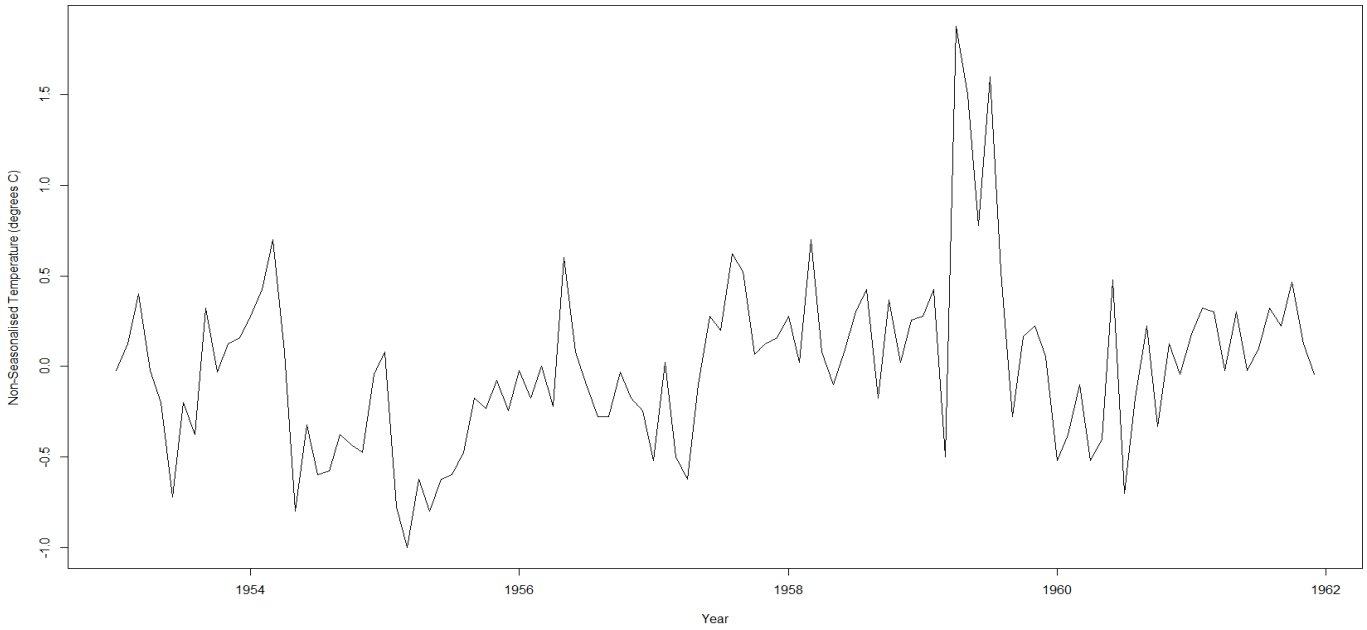
```
> acf(ts(recife,freq=1),lag.max=40,main="Autocorrelation
Function for Recife Data",ylim=c(-1,1))
```

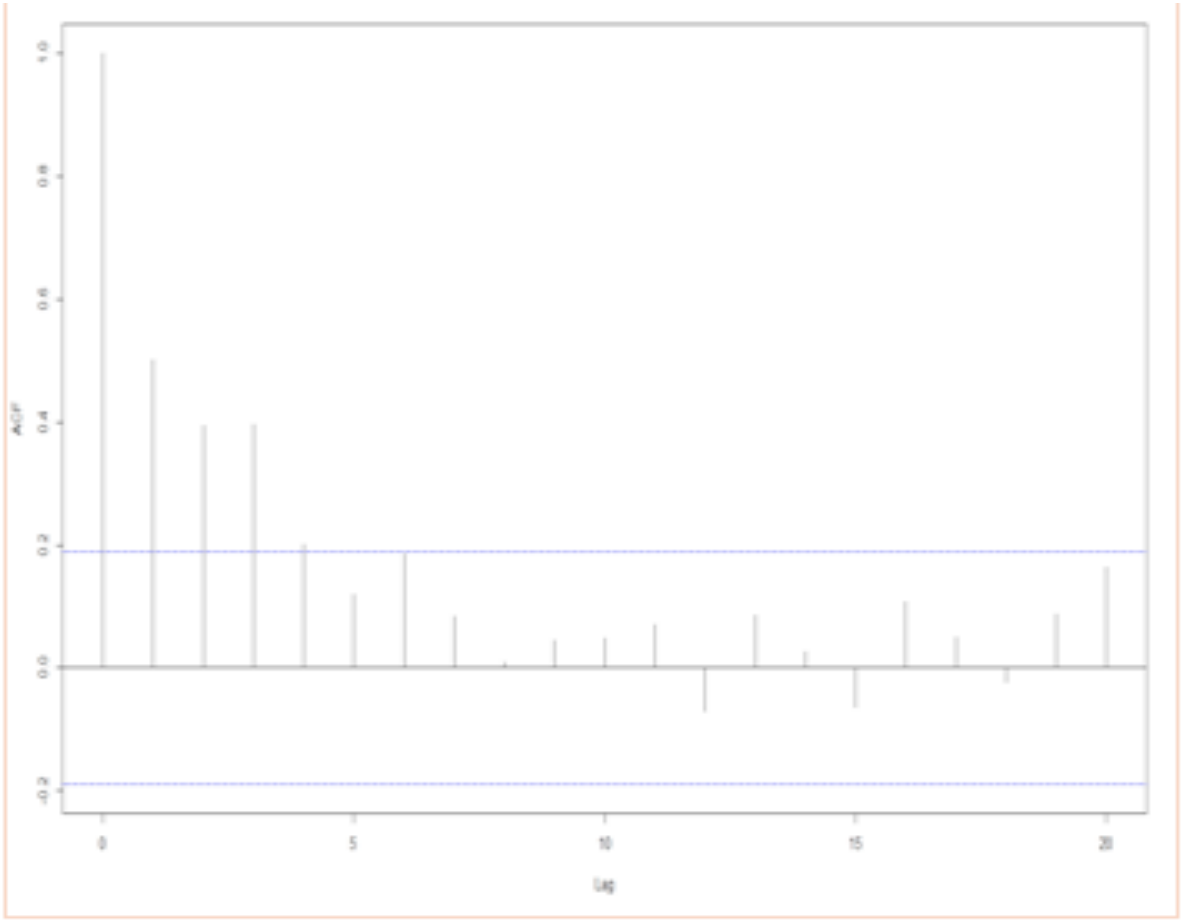
The correlogram identifies the obvious seasonal variation, with high positive autocorrelations at lags 12, 24, …
We can remove the seasonality in the data by calculating monthly averages and subtracting them from the raw data:





Month	Av. Temp. 1953-161 (°C)
January	26.82
February	27.08
March	26.70
April	26.32
May	25.60
June	24.62
July	24.00
August	23.98
September	24.98
October	25.83
November	26.28
December	26.74


Non-Seasonalised Temperature (degrees C)
-1.0
-0.5
0.0
0.5
1.0
1.5
1954
1956
1958
1960
1962
Year


ACF
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
0
5
10
15
20
Lag