Practical-2

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Objective:-

The "Nottem" dataset is available in the R library and contains historical time series observations. Using this dataset, perform the following tasks:

Question:-

(a) Write the R command to load the library in which the "Nottem" dataset is available

(b) Write the R command to load the "Nottem" dataset into the R working environment

(c) Write the appropriate R command to view the description of the dataset and briefly explain the key characteristics of the data

(d) Explain the nature of the data in terms of its sampling frequency

(e) Plot the time series data and write your observations about the pattern of the data

R-Code:-

LIBRARY

install.packages("dataset")

CODE:-

```
install.packages("dataset")

data("nottem")

?nottem

frequency(nottem)

plot( nottem,

main = "Monthly Average Air Temperatures at Nottingham Castle",

xlab = "Year",

ylab = "Temperature (°F)",

col = "red",

lwd = 2

 )
```
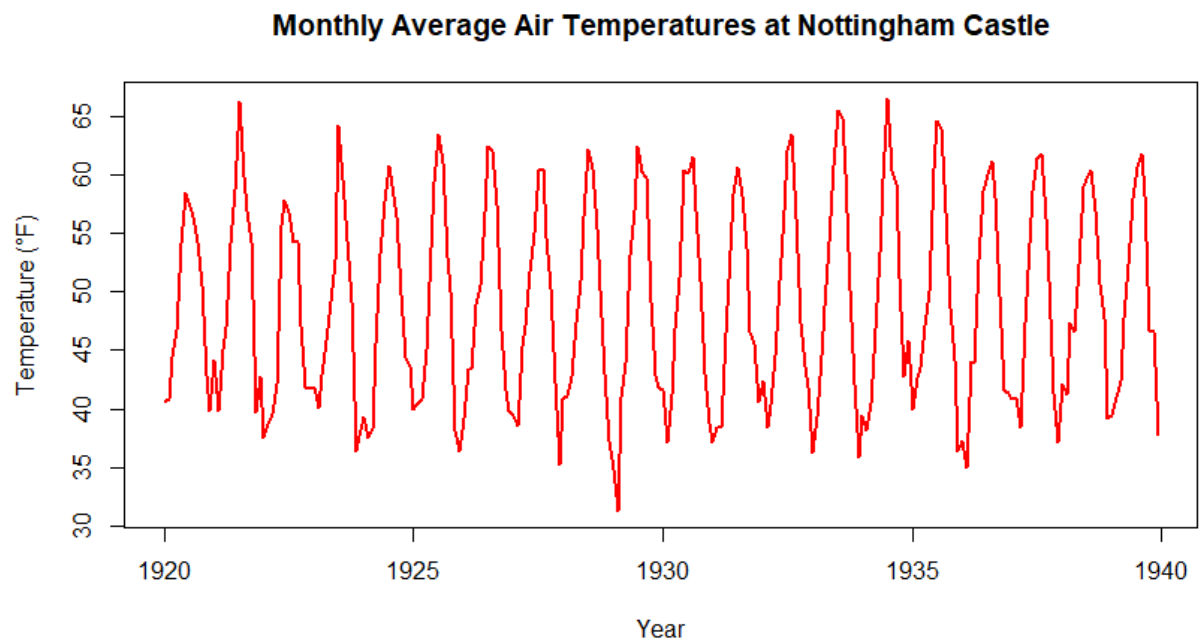
OUTPUT:-

Monthly Average Air Temperatures at Nottingham Castle

Conclusion:-

The **nottem** dataset shows a clear **annual seasonal pattern**, with temperatures rising in summer and falling in winter.
 There is **no significant long-term trend**, meaning the temperature pattern stays stable over the years.