Practical No. 05

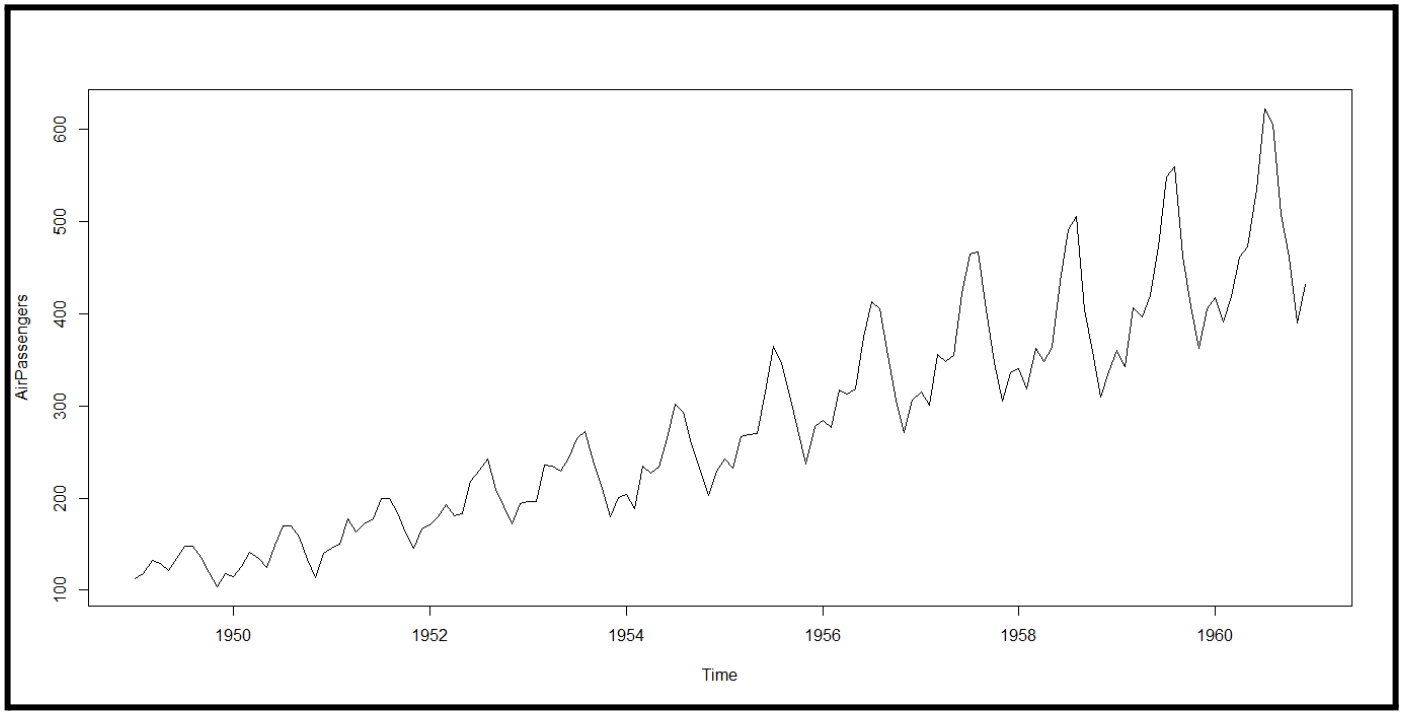
AIM - Practical of Time Series Forecasting.

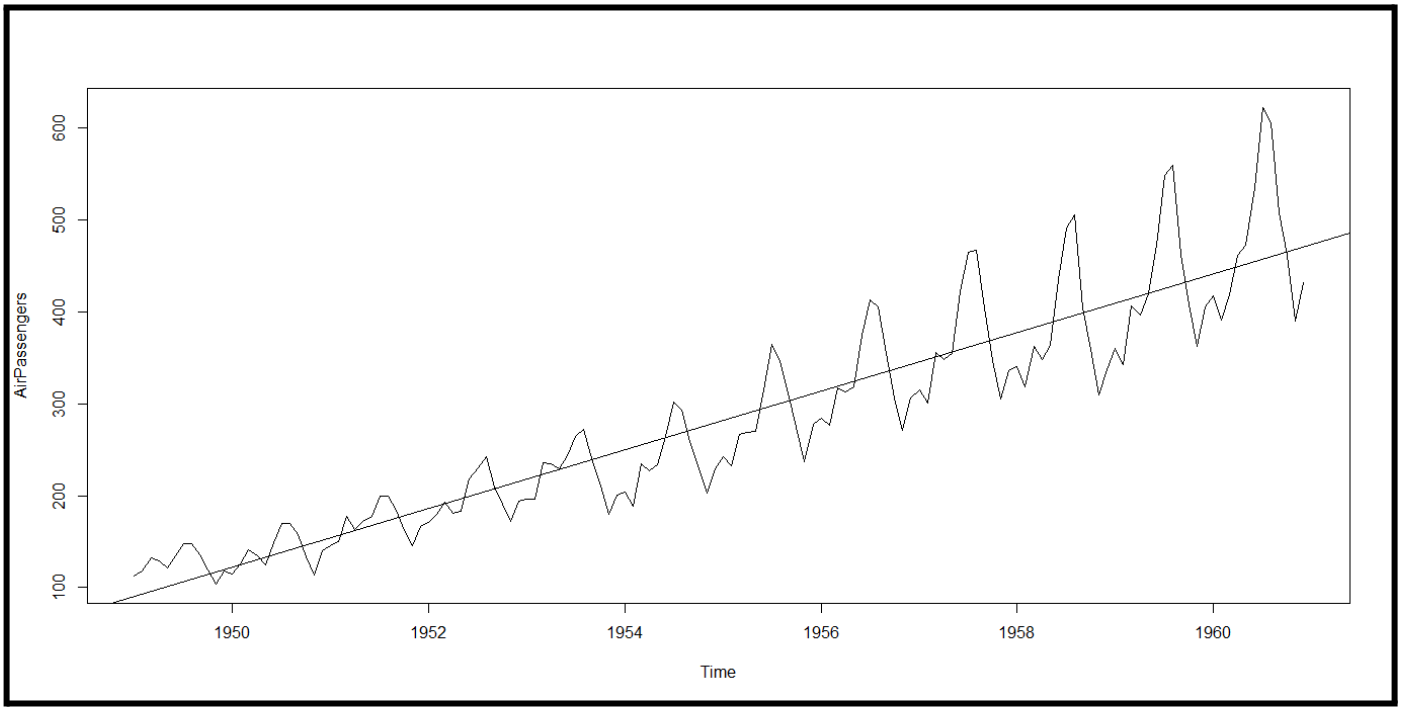
Source Code -

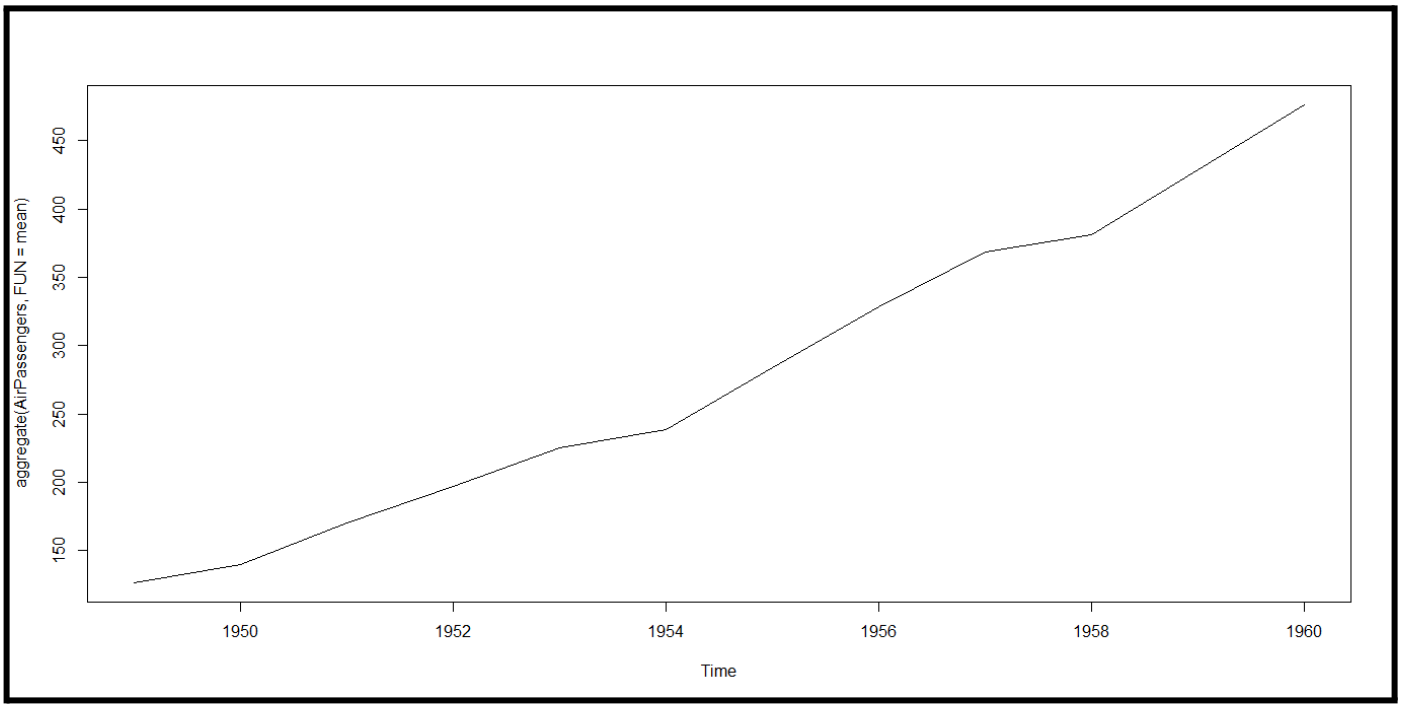
```
data("AirPassengers")
class(AirPassengers)
start(AirPassengers)
end(AirPassengers)
frequencey(AirPassengers)
summary(AirPassengers)
plot(AirPassengers)
abline(reg=lm(AirPassengers~time(AirPassengers)))
cycle(AirPassengers)
plot(aggregate(AirPassengers, FUN = mean))
boxplot(AirPassengers~cycle(AirPassengers))
```

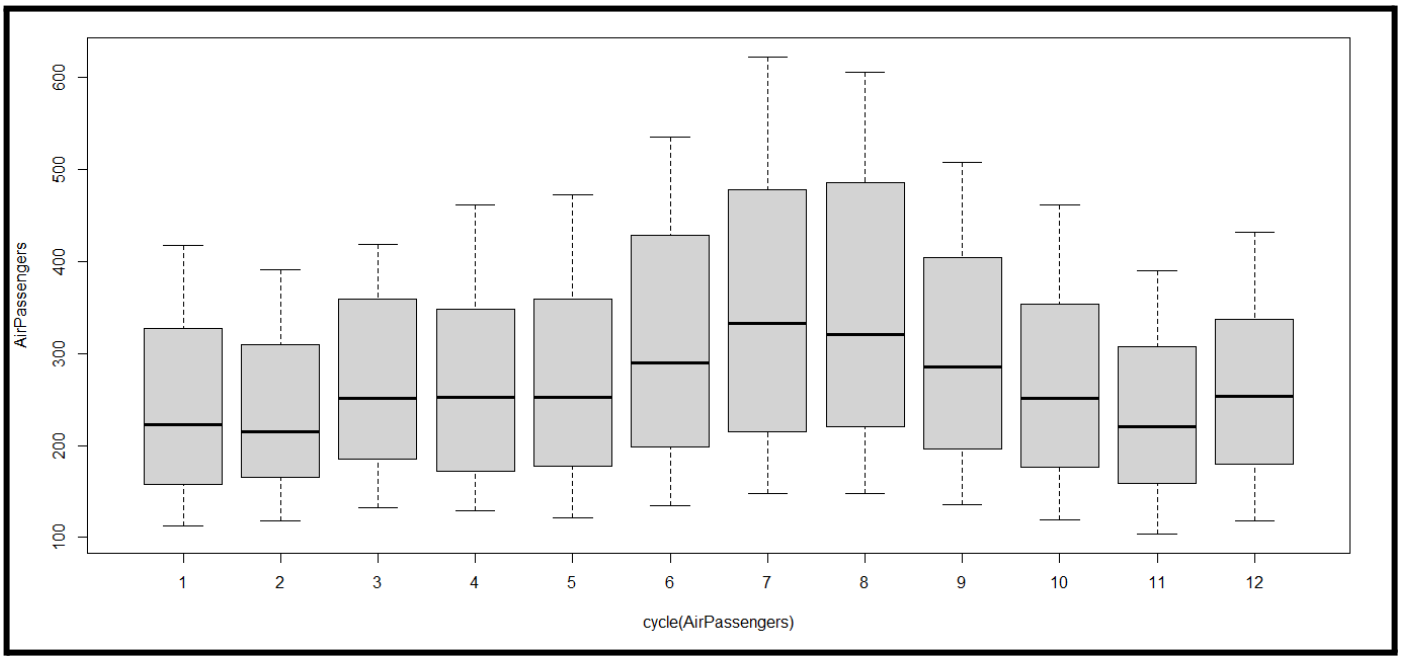
OUTPUT -

```
> data("AirPassengers")
> class(AirPassengers)
[1] "ts"
> start(AirPassengers)
[1] 1949    1
> end(AirPassengers)
[1] 1960   12
> frequency(AirPassengers)
[1] 12
> summary(AirPassengers)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
  104.0   180.0   265.5   280.3   360.5   622.0
> plot(AirPassengers)
> abline(reg=lm(AirPassengers~time(AirPassengers)))
> cycle(AirPassengers)
     Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1949   1   2   3   4   5   6   7   8   9  10  11  12
1950   1   2   3   4   5   6   7   8   9  10  11  12
1951   1   2   3   4   5   6   7   8   9  10  11  12
1952   1   2   3   4   5   6   7   8   9  10  11  12
1953   1   2   3   4   5   6   7   8   9  10  11  12
1954   1   2   3   4   5   6   7   8   9  10  11  12
1955   1   2   3   4   5   6   7   8   9  10  11  12
1956   1   2   3   4   5   6   7   8   9  10  11  12
1957   1   2   3   4   5   6   7   8   9  10  11  12
1958   1   2   3   4   5   6   7   8   9  10  11  12
1959   1   2   3   4   5   6   7   8   9  10  11  12
1960   1   2   3   4   5   6   7   8   9  10  11  12
> plot(aggregate(AirPassengers, FUN = mean))
> boxplot(AirPassengers~cycle(AirPassengers))
```


AirPassengers
100
200
300
400
500
600
1950
1952
1954
1956
1958
1960
Time


AirPassengers
100
200
300
400
500
600
1950
1952
1954
1956
1958
1960
Time


aggregate(AirPassengers, FUN = mean)
150
200
250
300
350
400
450
1950
1952
1954
1956
1958
1960
Time


AirPassengers
100
200
300
400
500
600
1
2
3
4
5
6
7
8
9
10
11
12
cycle(AirPassengers)