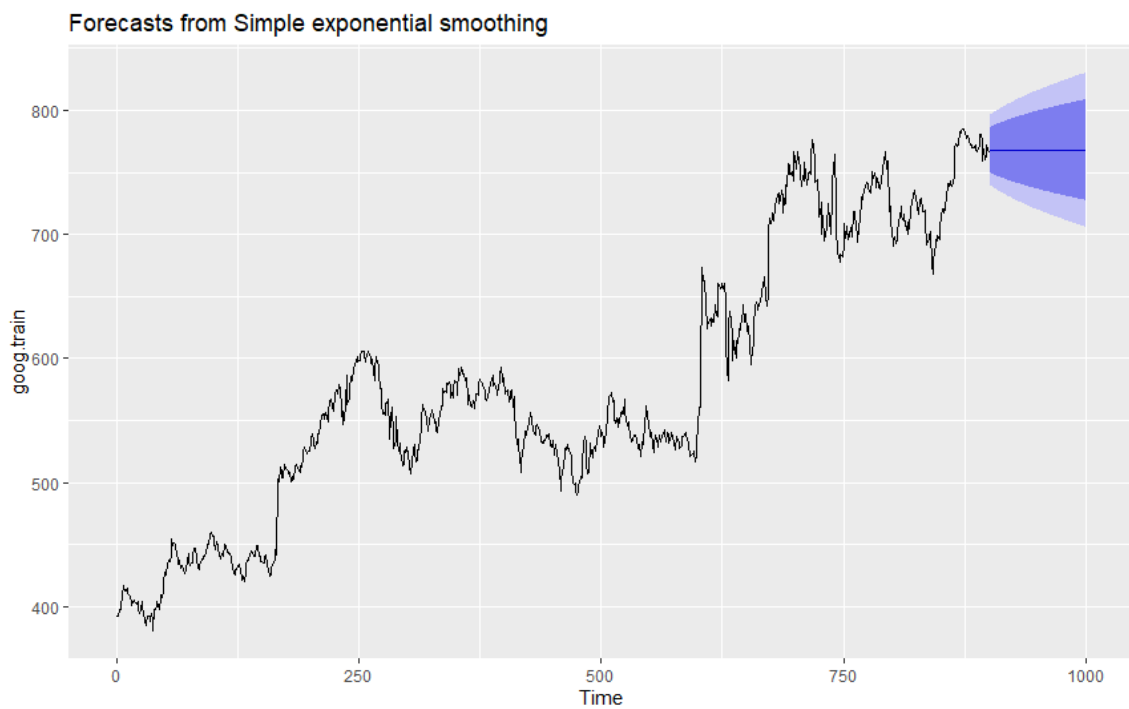# ASSIGNMENT-5

SUHAAS K.-PES1201700015
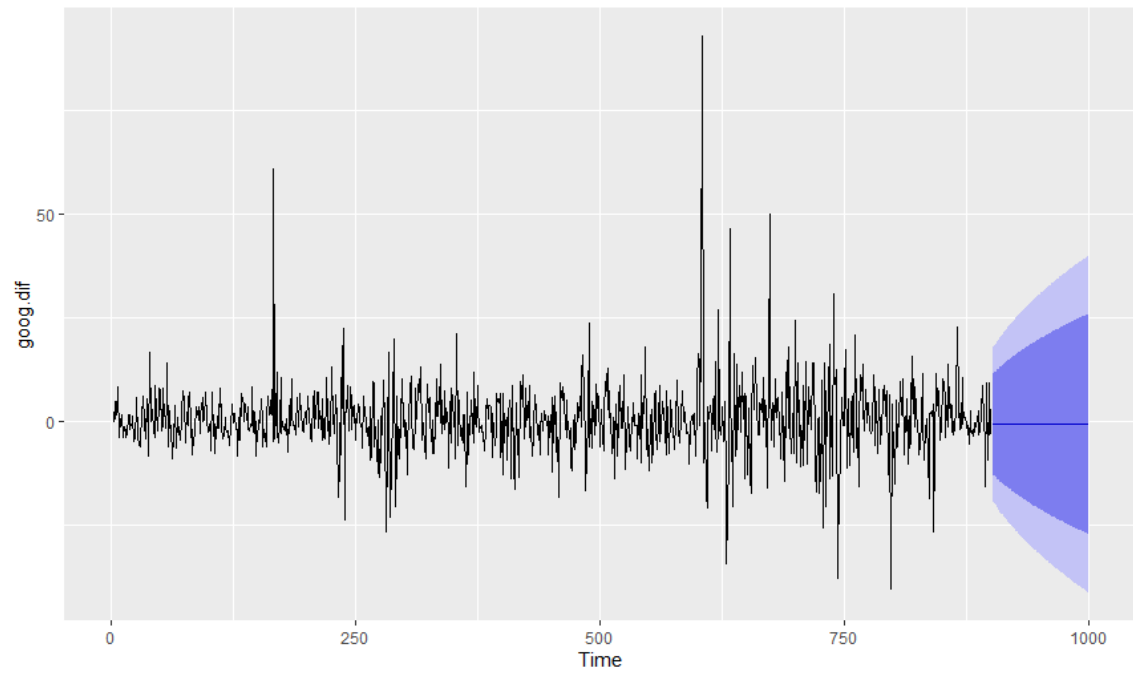
APOORVE GUPTA-PES1201700038

KAUSTUBH JHA-PES1201700040

SARANSH GUPTA -PES1201700267

Forecasts from Simple exponential smoothing
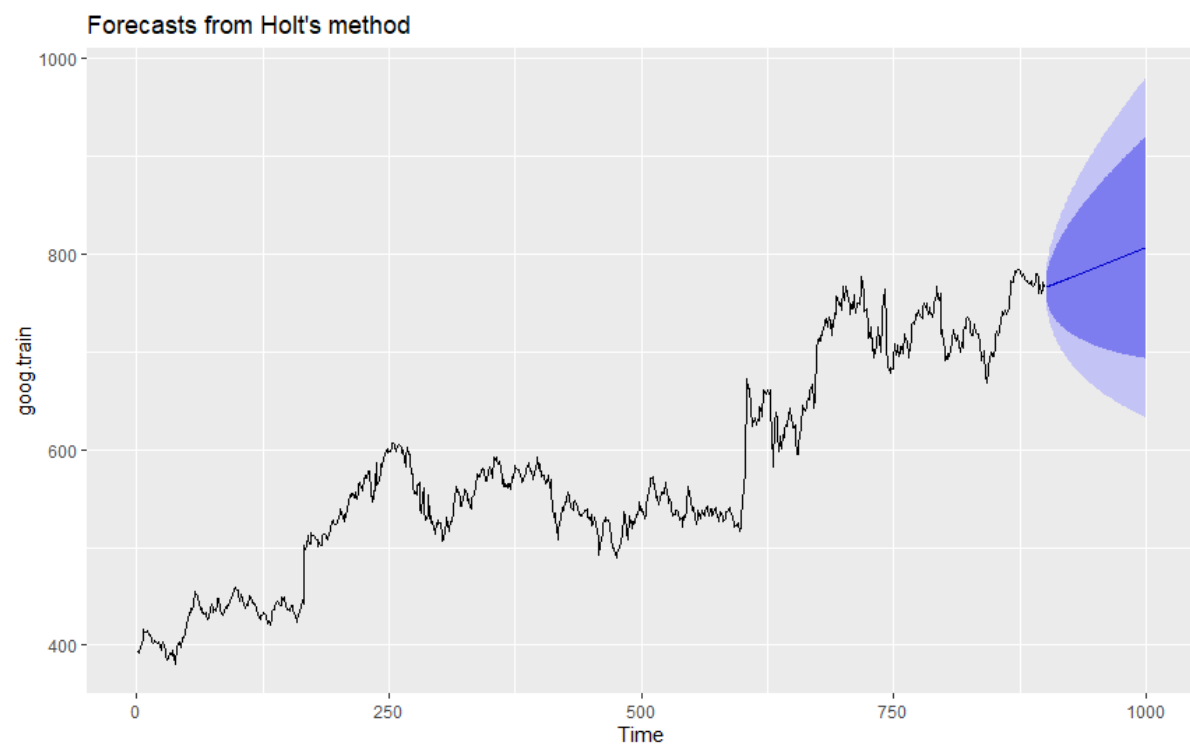
Forecasts from Simple exponential smoothing


```
                     ME      RMSE       MAE       MPE      MAPE      MASE      ACF1 Theil's U
Training set   2.041321  14.18379  9.913305 0.3098205  1.700573  1.707184 0.7795089        NA
Test set      19.009181  26.74882 22.151977 2.3598077  2.777610  3.814823 0.8949134  3.219065
> |
```

```
> accuracy(ses.goog.dif, goog.dif.test)
                      ME     RMSE      MAE       MPE      MAPE      MASE         ACF1 Theil's U
Training set  -0.01368221 9.317223 6.398819  99.97907  253.7069 0.7572009 -0.05440377        NA
Test set       0.97219517 8.141450 6.117483 109.93320  177.9684 0.7239091  0.12278141 0.9900678
> |
```
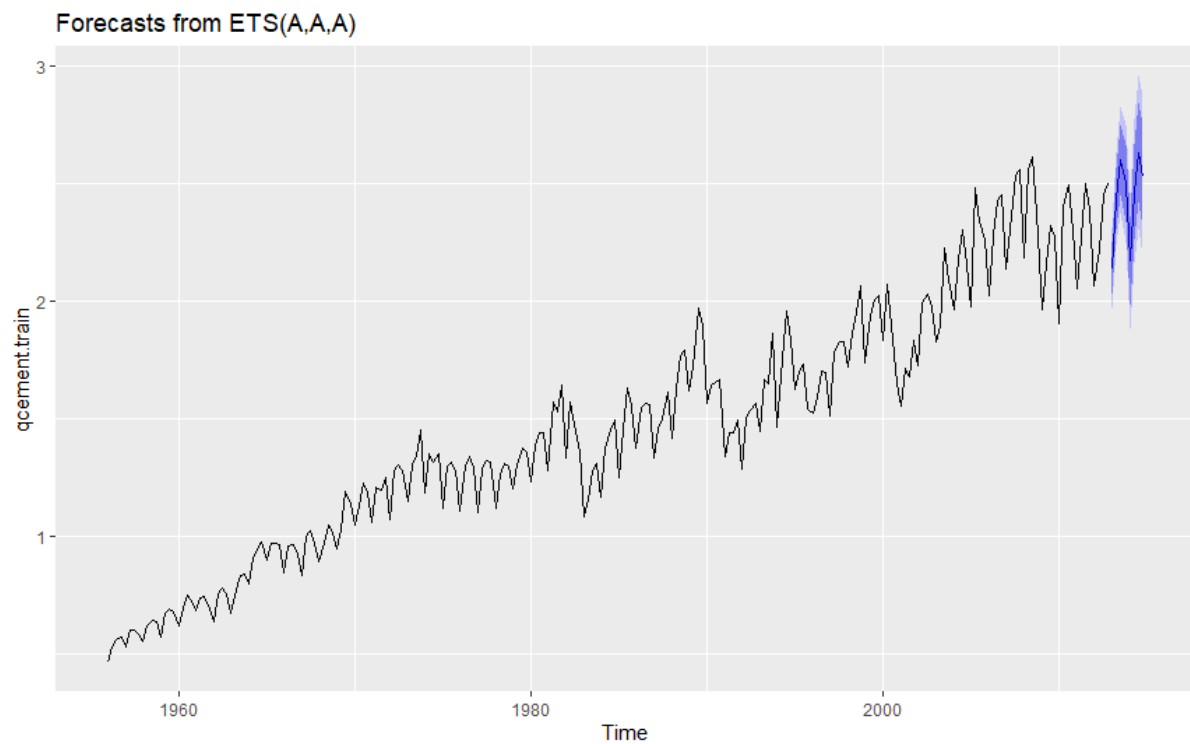
Forecasts from Holt's method


```
> accuracy(holt.goog,goog.test)
                      ME        RMSE        MAE         MPE       MAPE      MASE       ACF1 Theil's U
Training set -0.003332796  8.795267   5.821057 -0.01211821 1.000720 1.002452 0.03100836        NA
Test set      0.545744415 16.328680  12.876836  0.03013427 1.646261 2.217538 0.87733298  2.024518
> |
```
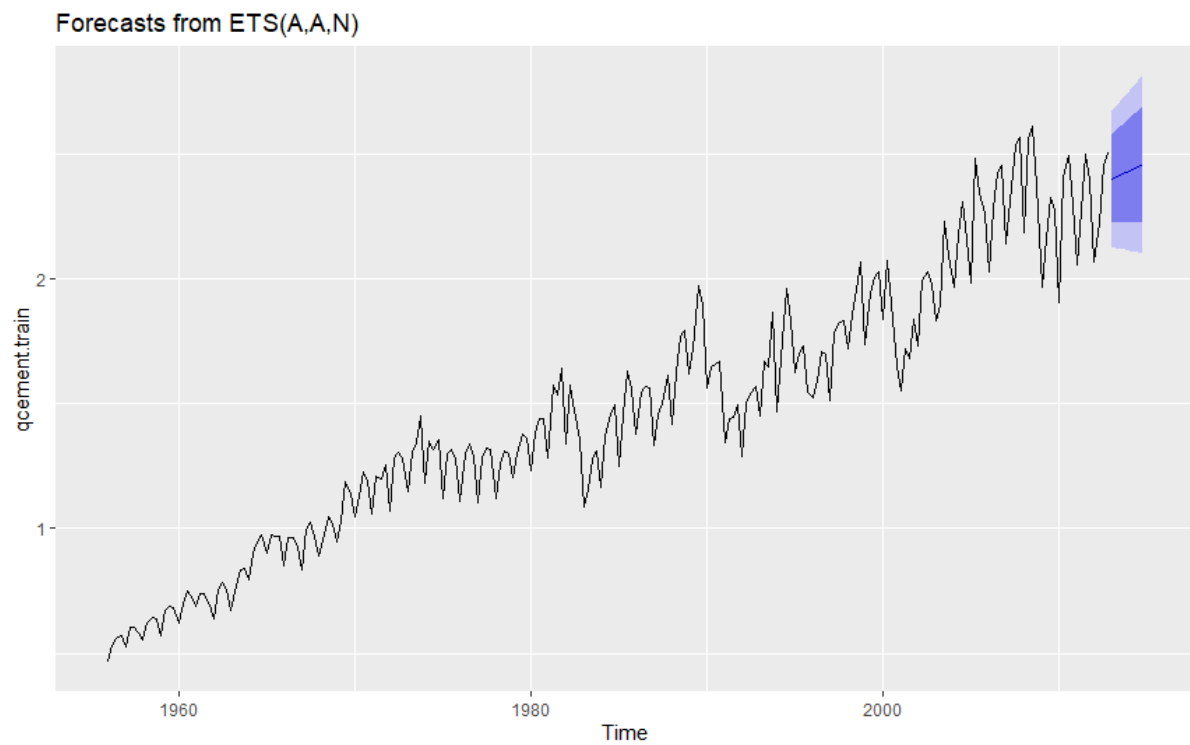
Forecasts from ETS(A,A,A)


```
> accuracy(qcement.f1, qcement.test)
                       ME       RMSE        MAE          MPE     MAPE      MASE        ACF1 Theil's U
Training set 0.001463693 0.08393279 0.05976830 -0.003454533 3.922727 0.5912949  0.02150539        NA
Test set     0.031362775 0.07144211 0.06791904  1.115342984 2.899446 0.6719311 -0.31290496 0.2112428
> |
```
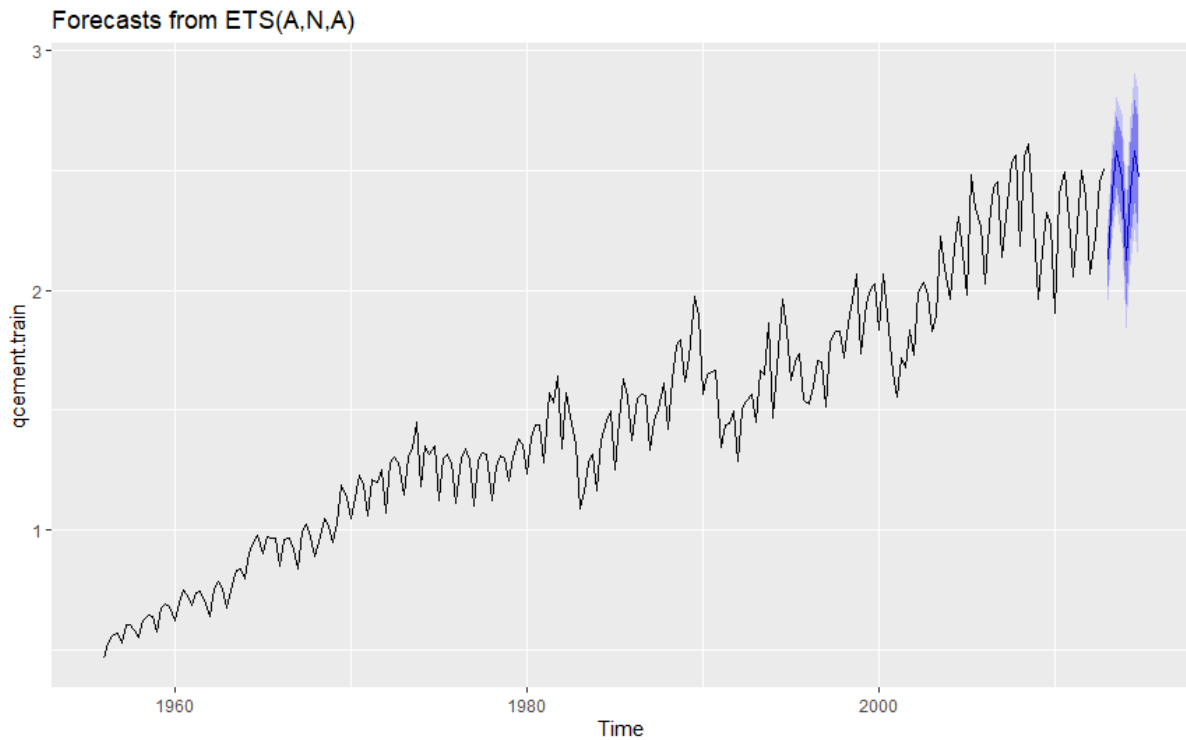
Forecasts from ETS(A,A,N)

```
> accuracy(qcement.f1, qcement.test)
                      ME        RMSE        MAE         MPE       MAPE      MASE         ACF1 Theil's U
Training set  0.0001794161 0.1365402 0.1045445 -0.5490086 7.114495 1.034271   0.10690021        NA
Test set     -0.0135237513 0.2223811 0.2073752 -1.4853686 8.976100 2.051588  -0.02586266 0.5225482
> |
```

Forecasts from ETS(A,N,A)


```
> accuracy(qcement.f1, qcement.test)
                    ME        RMSE        MAE         MPE       MAPE      MASE         ACF1 Theil's U
Training set  0.01189679 0.08459019 0.06077136 0.7882161 3.952821 0.6012182   0.01913719        NA
Test set      0.05817018 0.09137833 0.08918584 2.2368423 3.750540 0.8823262  -0.24717956 0.2957023
> |
```