

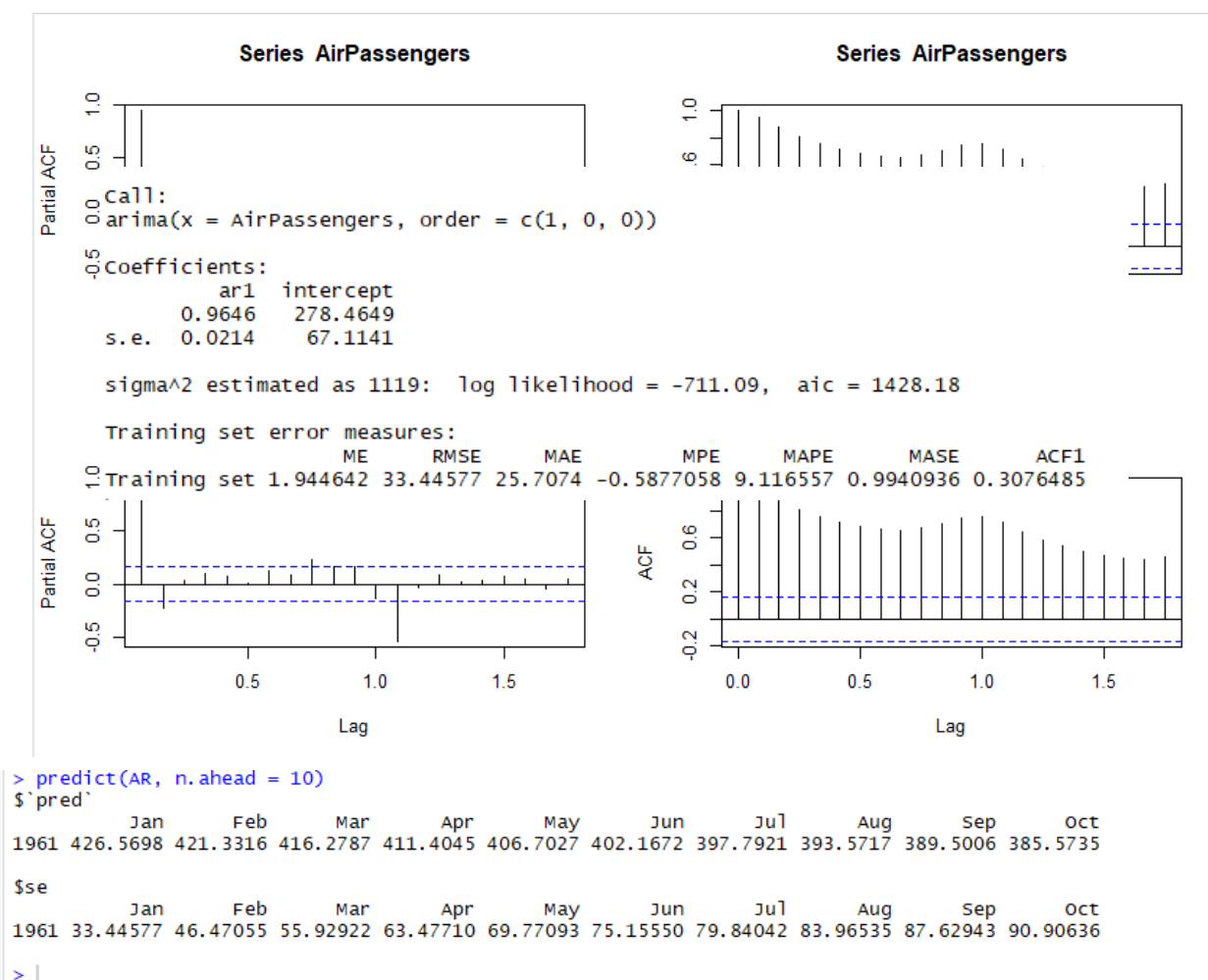
ASSIGNMENT-6

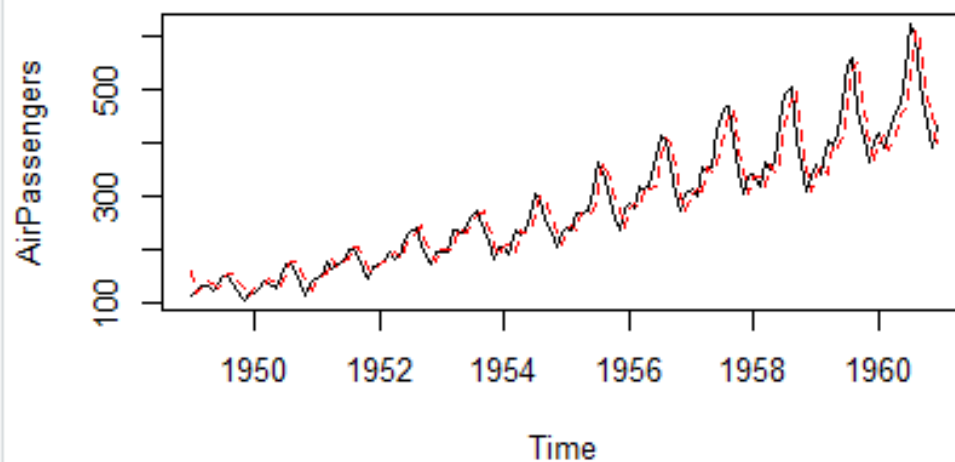
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SARANSH GUPTA -PES1201700267





```
> summary(MA)
```

```
Call:
arima(x = AirPassengers, order = c(0, 0, 1))
```

```
Coefficients:
```

```
      ma1  intercept
      0.9642  280.6464
s.e.    0.0214   10.5788
```

```
sigma^2 estimated as 4205:  log likelihood = -806.43,  aic = 1618.86
```

```
Training set error measures:
```

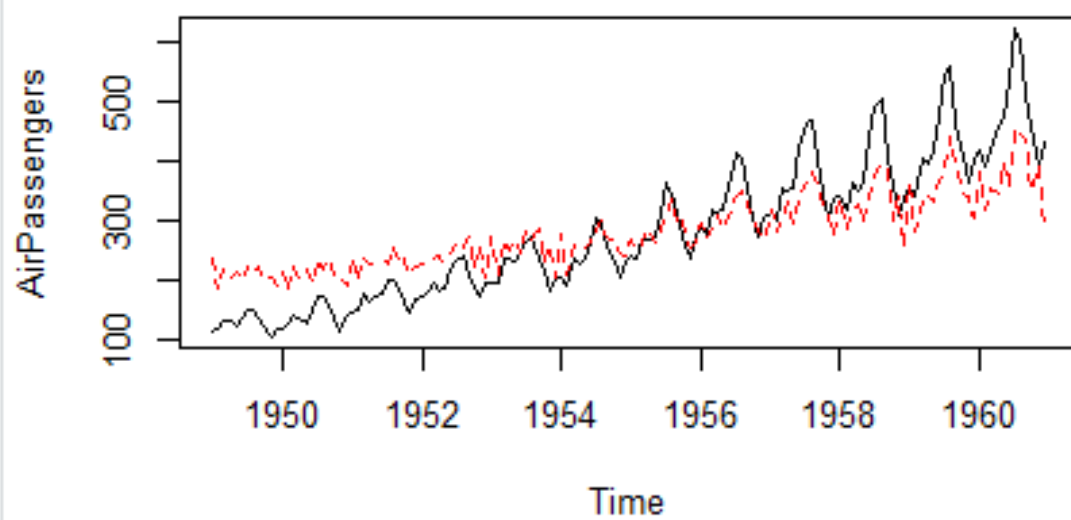
```
Training set      ME      RMSE      MAE      MPE      MAPE      MASE      ACF1
0.4138396 64.84889 52.86729 -10.70417 23.16898 2.044354 0.7748281
```

```
> predict(MA,n.ahead=10)
```

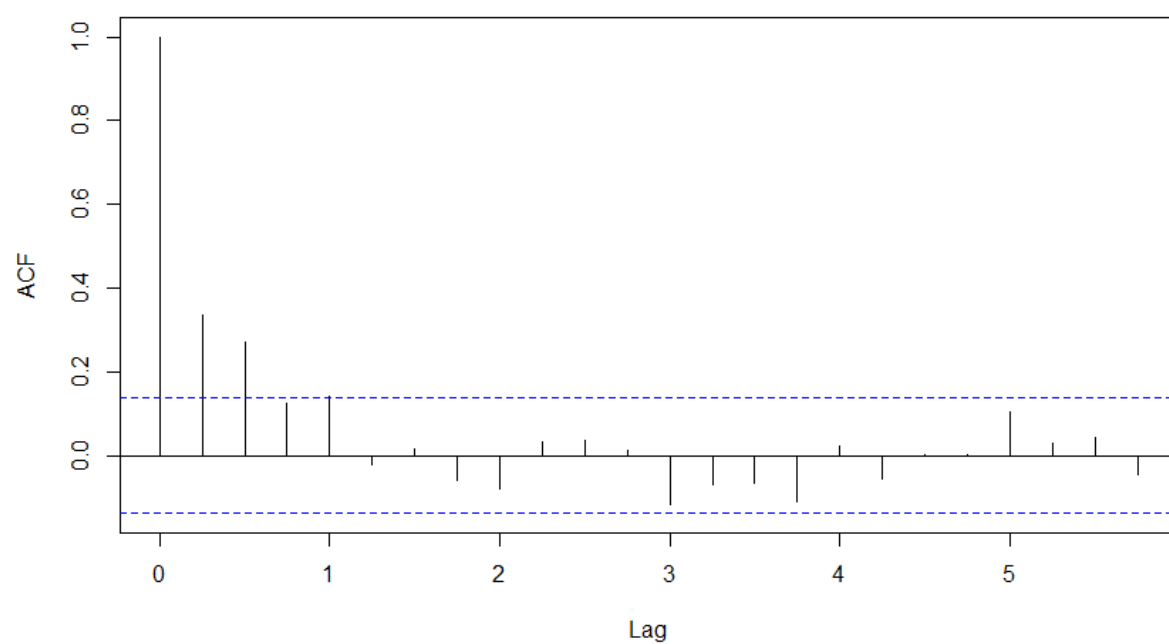
```
$`pred`
      Jan      Feb      Mar      Apr      May      Jun      Jul      Aug      Sep      Oct
1961 425.1049 280.6464 280.6464 280.6464 280.6464 280.6464 280.6464 280.6464 280.6464 280.6464
```

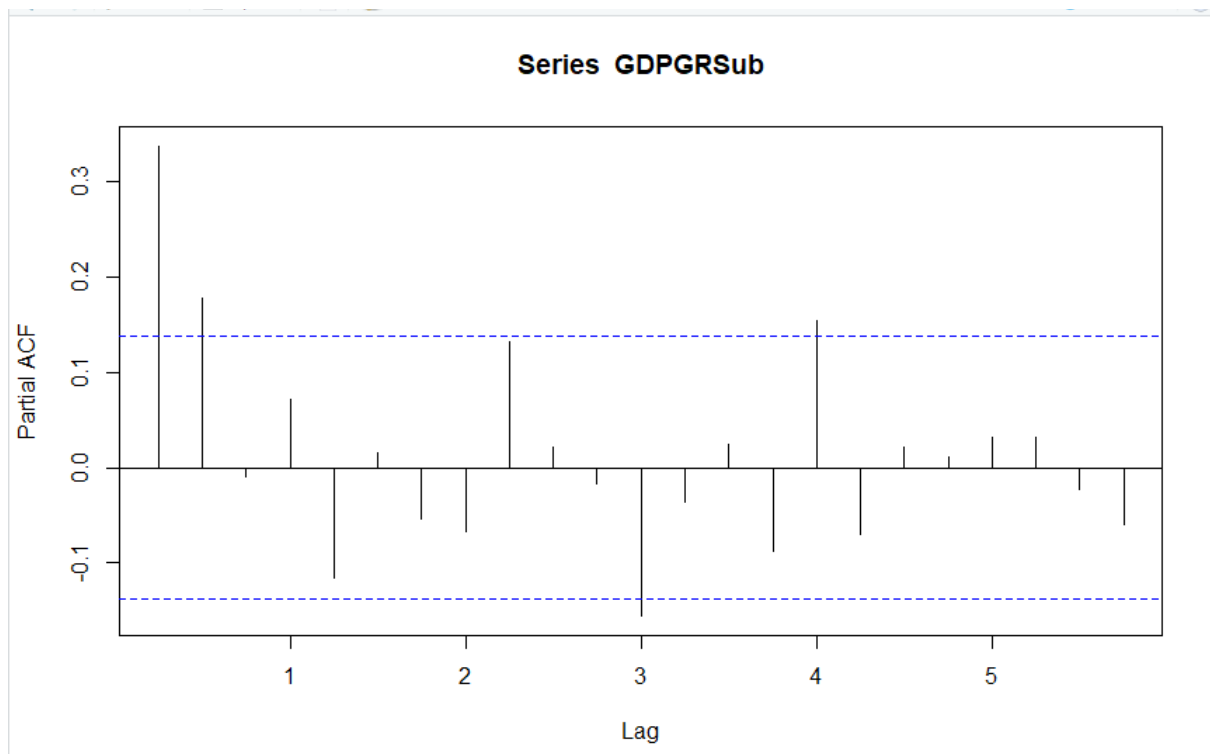
```
$se
```

```
      Jan      Feb      Mar      Apr      May      Jun      Jul      Aug      Sep      Oct
1961 64.84895 90.08403 90.08403 90.08403 90.08403 90.08403 90.08403 90.08403 90.08403 90.08403
```



Series GDPGRSub





```
> summary(ARMA)
```

Call:

```
arima(x = GDPGRSub, order = c(1, 0, 1))
```

Coefficients:

	ar1	ma1	intercept
	0.6744	-0.3785	3.0595
s.e.	0.1124	0.1368	0.4121

sigma^2 estimated as 9.646: log likelihood = -520.73, aic = 1049.47

Training set error measures:

	ME	RMSE	MAE	MPE	MAPE	MASE	ACF1
Training set	-0.01389851	3.105772	2.26943	-90.02467	170.0699	0.7823674	-0.02012751

```
> predict(ARMA, n.ahead = 10)
```

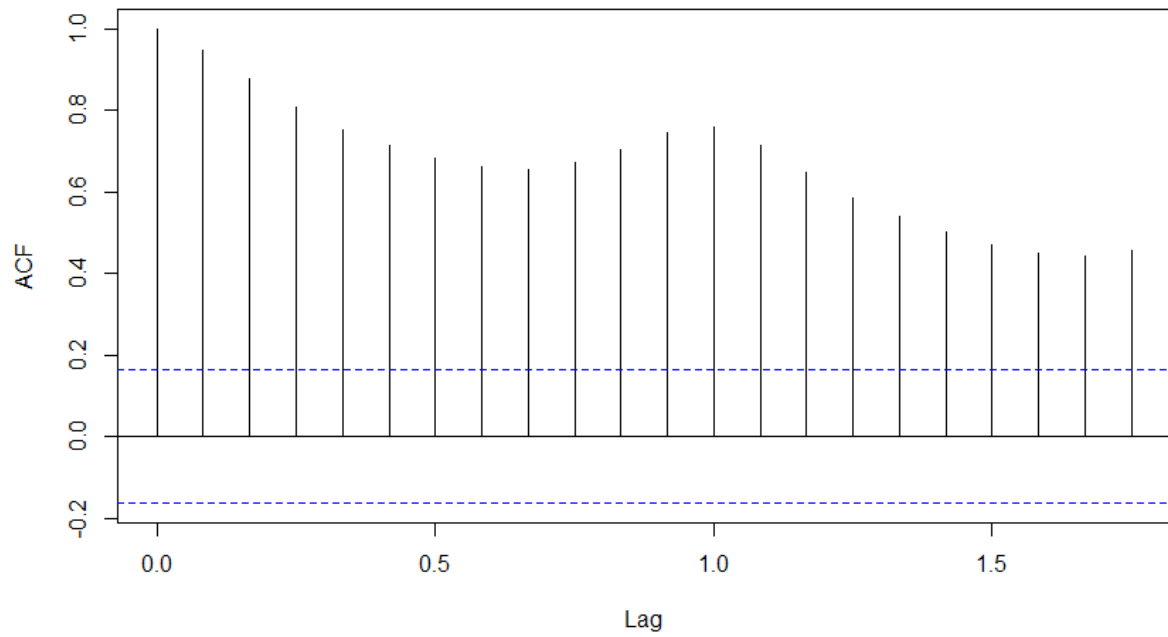
\$`pred`

	Qtr1	Qtr2	Qtr3	Qtr4
52	2.097509	2.410713	2.621940	2.764394
53	2.860466	2.925257	2.968953	2.998422
54	3.018296	3.031700		

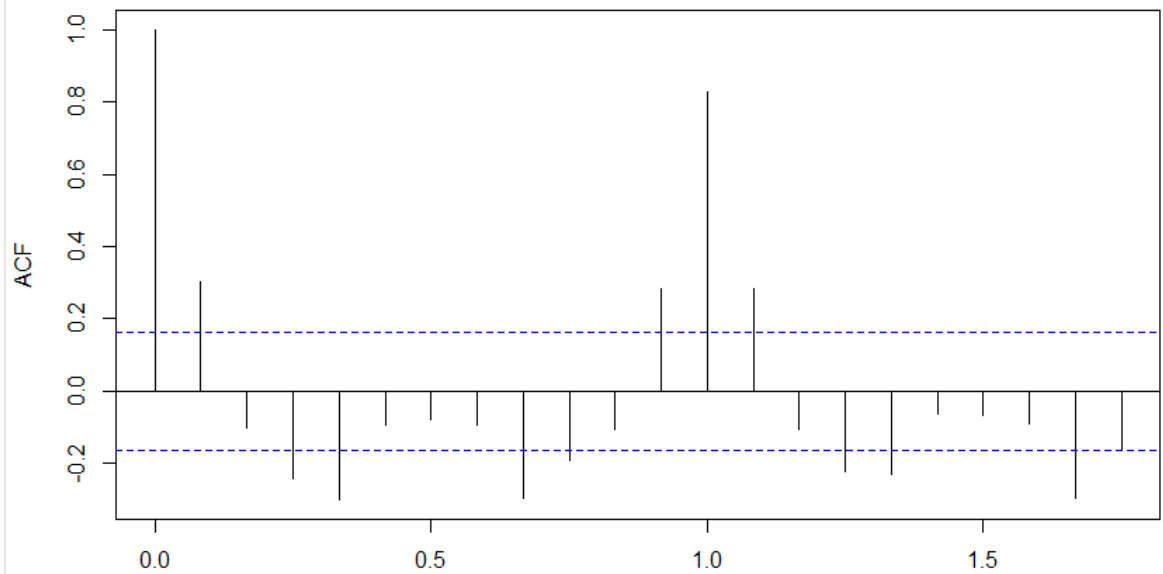
\$se

	Qtr1	Qtr2	Qtr3	Qtr4
52	3.105772	3.238884	3.297650	3.324034
53	3.335966	3.341378	3.343837	3.344955
54	3.345463	3.345694		

Series AirPassengers



Series diff(AirPassengers)



```
> predict(ARIMA, n.ahead = 11)
```

```
$`pred`
```

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1961	475.7282	454.9963	464.8255	460.1654	462.3748	461.3273	461.8239	461.5884	461.7001	461.6471	461.6722

```
$se
```

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1961	31.01914	53.09757	64.92951	76.30576	85.60247	94.23753	102.03395	109.32470	116.13679	122.58072	128.69797

