*************************** Mahmullah *********************************
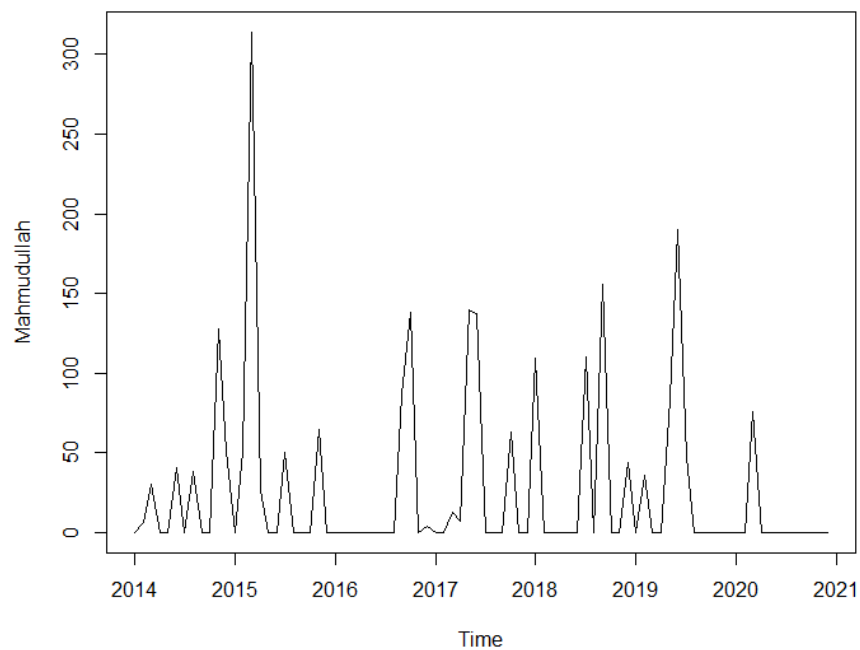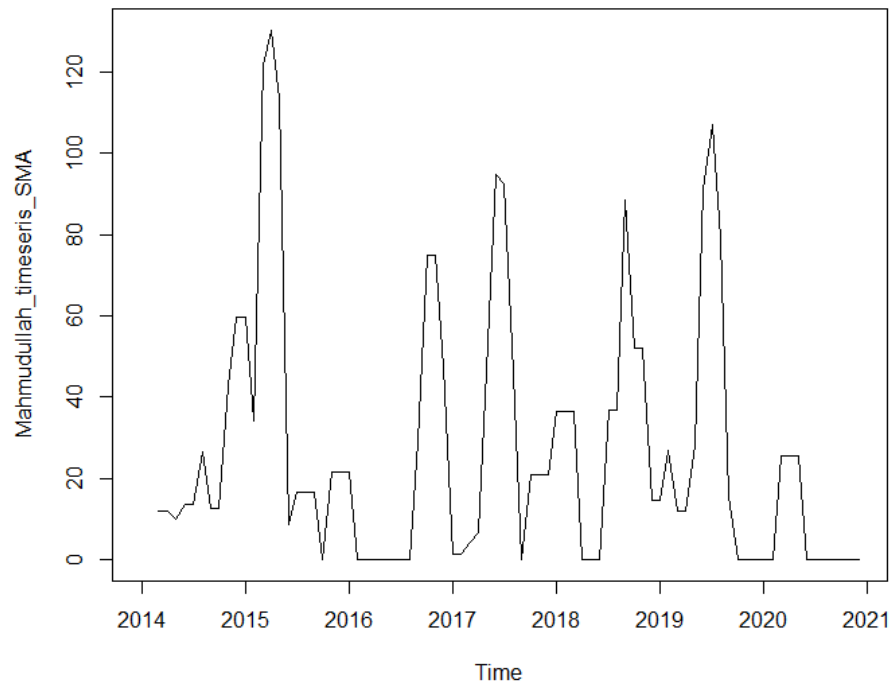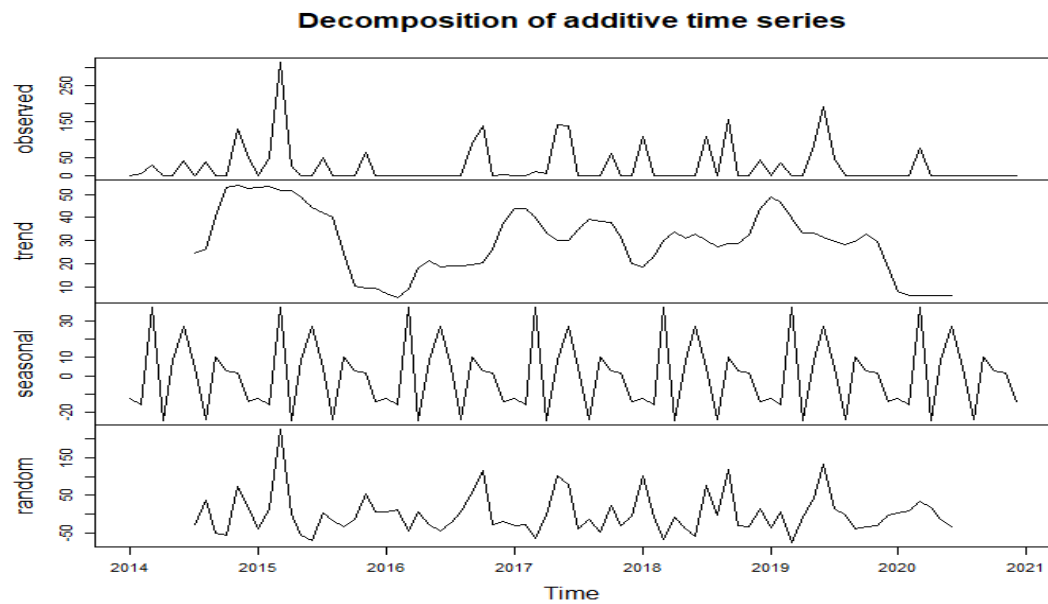
```
> Mahmudullah<-c(0,6,30,0,0,41,0,38,0,0,128,51,0,51,314,26,0,0,50,0,0,0,65,0,
0,0,0,0,0,0,0,0,87,138,0,4,0,0,13,7,140,137,0,0,0,63,0,0,109,0,0,0,0,0,110,0,
156,0,0,44,0,36,0,0,84,190,47,0,0,0,0,0,0,0,76,0,0,0,0,0,0,0,0,0)
> print(Mahmudullah)
 [1]   0   6  30   0   0  41   0  38   0   0 128  51   0  51 314  26   0   0
50   0   0
[22]   0  65   0   0   0   0   0   0   0   0   0  87 138   0   4   0   0  13
7 140 137
[43]   0   0   0  63   0   0 109   0   0   0   0   0 110   0 156   0   0  44
0  36   0
[64]   0  84 190  47   0   0   0   0   0   0   0  76   0   0   0   0   0   0
0   0   0
> Mahmudullah <- ts(Mahmudullah,start = c(2014,1),frequency=12)
> print(Mahmudullah)
     Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2014   0   6  30   0   0  41   0  38   0   0 128  51
2015   0  51 314  26   0   0  50   0   0   0  65   0
2016   0   0   0   0   0   0   0   0  87 138   0   4
2017   0   0  13   7 140 137   0   0   0  63   0   0
2018 109   0   0   0   0   0 110   0 156   0   0  44
2019   0  36   0   0  84 190  47   0   0   0   0   0
2020   0   0  76   0   0   0   0   0   0   0   0   0
> plot.ts(Mahmudullah)
```

```
> library(TTR)
> Mahmudullah_timeseris_SMA<-SMA(Mahmudullah,n=3)
> plot(Mahmudullah_timeseris_SMA)
```



```
> Mahmudullah_timeseris_components<-decompose(Mahmudullah)
> plot(Mahmudullah_timeseris_components)
```
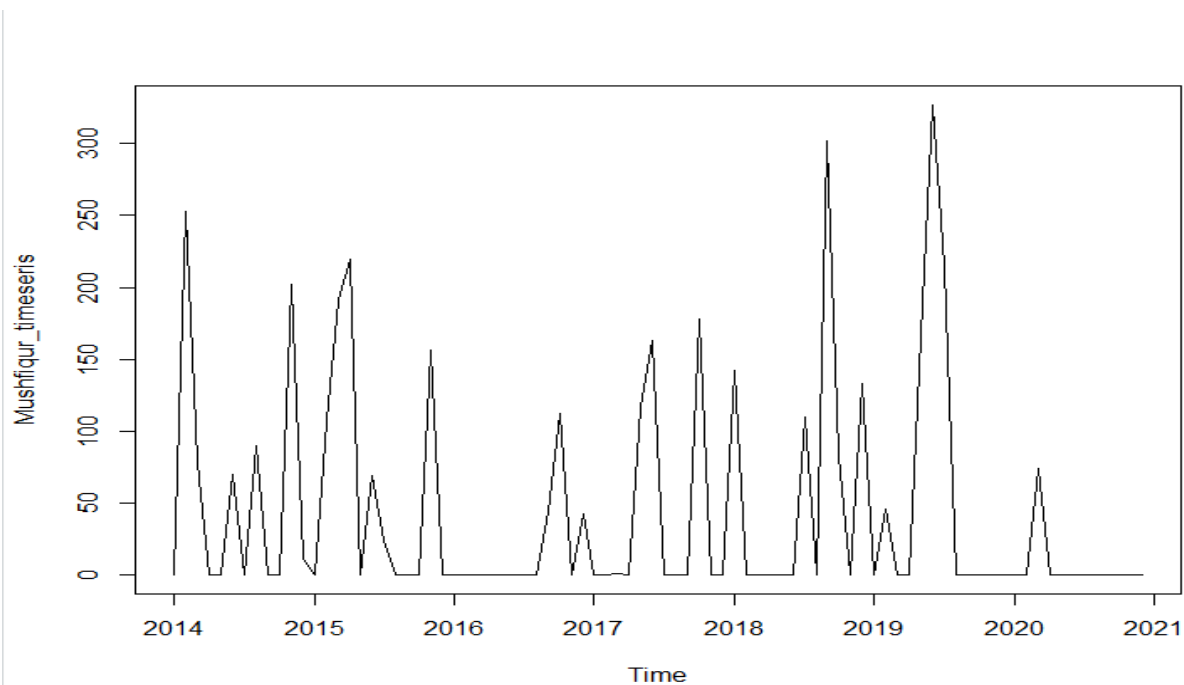

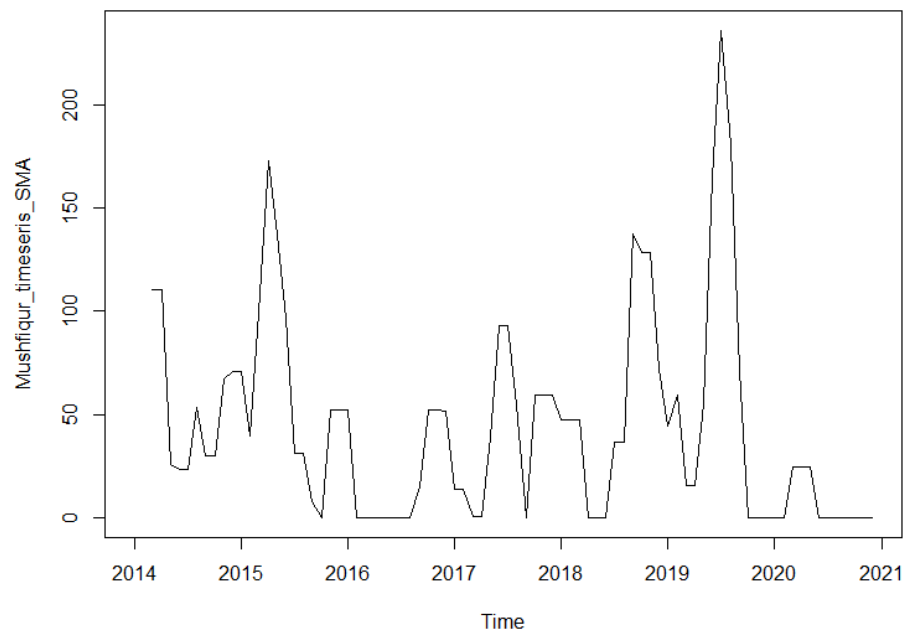Decomposition of additive time series

```
> Mushfiqur<-c(0,253,78,0,0,70,0,90,0,0,202,11,0,107,191,220,0,69,24,0,0,0,15
6,0,0,0,0,0,0,0,0,0,44,112,0,42,0,0,1,0,116,163,0,0,0,178,0,0,142,0,0,0,0,0,1
10,0,302,83,0,133,0,46,0,0,166,327,215,0,0,0,0,0,0,74,0,0,0,0,0,0,0,0)
> print(Mushfiqur)
 [1]    0 253  78   0   0  70   0  90   0   0 202  11   0 107 191 220   0  69
 24   0   0   0
[23] 156   0   0   0   0   0   0   0   0   0  44 112   0  42   0   0   1   0
116 163   0   0
[45]   0 178   0   0 142   0   0   0   0   0 110   0 302  83   0 133   0  46
  0   0 166 327
[67] 215   0   0   0   0   0   0   0  74   0   0   0   0   0   0   0   0
> Mushfiqur_timeseris<-ts(Mushfiqur,start = c(2014,1),frequency = 12)
> print(Mushfiqur_timeseris)
     Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2014   0 253  78   0   0  70   0  90   0   0 202  11
2015   0 107 191 220   0  69  24   0   0   0 156   0
2016   0   0   0   0   0   0   0   0  44 112   0  42
2017   0   0   1   0 116 163   0   0   0 178   0   0
2018 142   0   0   0   0   0 110   0 302  83   0 133
2019   0  46   0   0 166 327 215   0   0   0   0   0
2020   0   0  74   0   0   0   0   0   0   0   0   0
> plot.ts(Mushfiqur_timeseris)
```
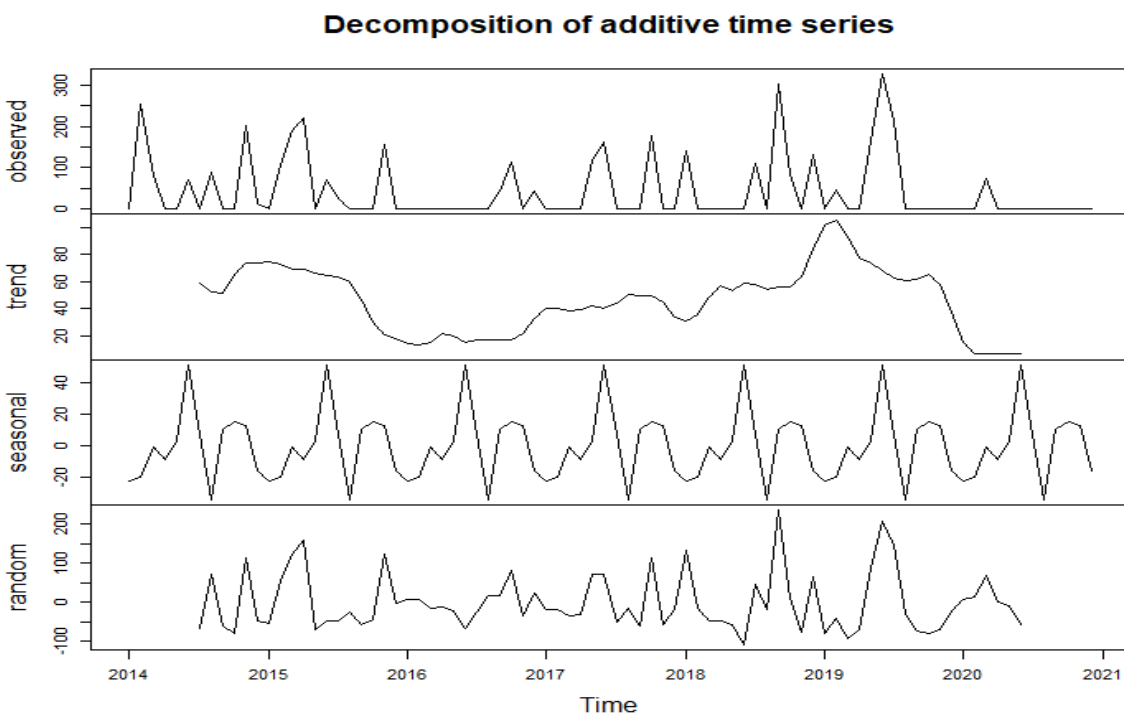


```
> library(TTR)
> Mushfiqur_timeseris_SMA<-SMA(Mushfiqur_timeseris,n=3)
> plot(Mushfiqur_timeseris_SMA)
```

```
> Mushfiqur_timeseris_Components<-decompose(Mushfiqur_timeseris)
> plot(Mushfiqur_timeseris_Components)
```

Decomposition of additive time series

**************************** Tamim Iqbal ****************************

```
> TamimIqbal<-c(0,0,0,0,0,4,0,118,0,0,137,29,0,19,135,312,0,78,67,0,0,0,132,0
,0,0,0,0,0,0,0,100,194,0,114,0,0,127,4,199,293,0,0,0,23,0,0,252,0,0,0,0,0,2
87,0,2,0,0,143,0,10,0,0,176,205,51,0,0,0,0,0,0,0,310,0,0,0,0,0,0,0,0,0)
> print(TamimIqbal)
 [1]    0    0    0    0    0    4    0  118    0    0  137   29    0   19  135  312    0   78
[19]   67    0    0    0  132    0    0    0    0    0    0    0    0    0  100  194    0  114
[37]    0    0  127    4  199  293    0    0    0   23    0    0  252    0    0    0    0    0
[55]  287    0    2    0    0  143    0   10    0    0  176  205   51    0    0    0    0    0
[73]    0    0  310    0    0    0    0    0    0    0
> TamimIqbal_timeseris<-ts(TamimIqbal,start = c(2014,1),frequency = 12)
> print(TamimIqbal_timeseris)
     Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2014   0   0   0   0   0   4   0 118   0   0 137  29
2015   0  19 135 312   0  78  67   0   0   0 132   0
2016   0   0   0   0   0   0   0   0 100 194   0 114
2017   0   0 127   4 199 293   0   0   0  23   0   0
2018 252   0   0   0   0   0 287   0   2   0   0 143
2019   0  10   0   0 176 205  51   0   0   0   0   0
2020   0   0 310   0   0   0   0   0   0   0   0   0
> library(TTR)
> TamimIqbal_timeseris_SMA<-SMA(TamimIqbal_timeseris,n=3)
> plot.ts(TamimIqbal_timeseris)
```
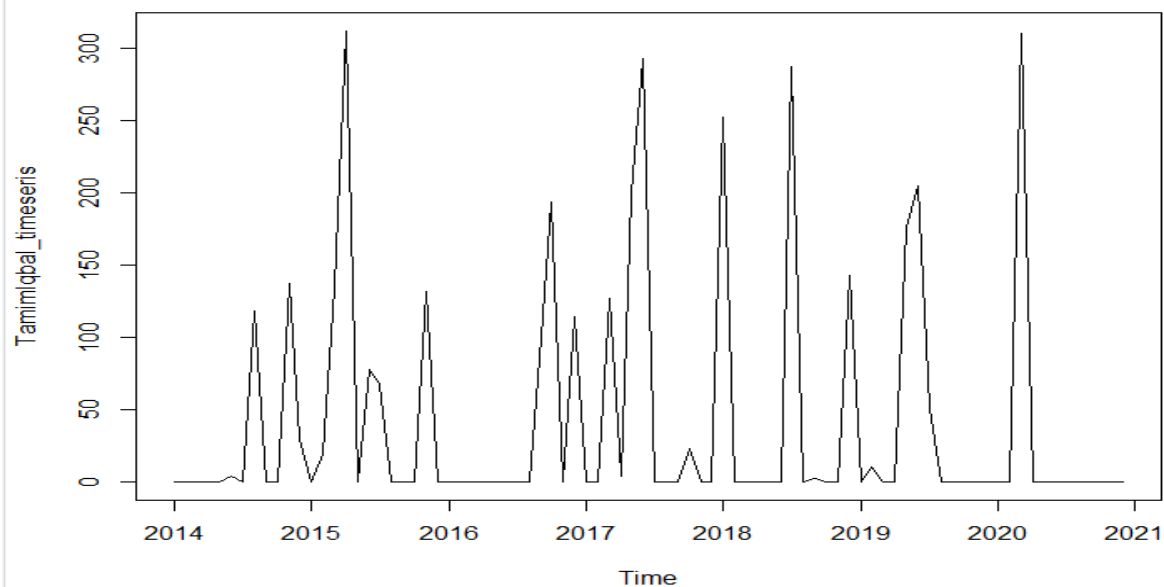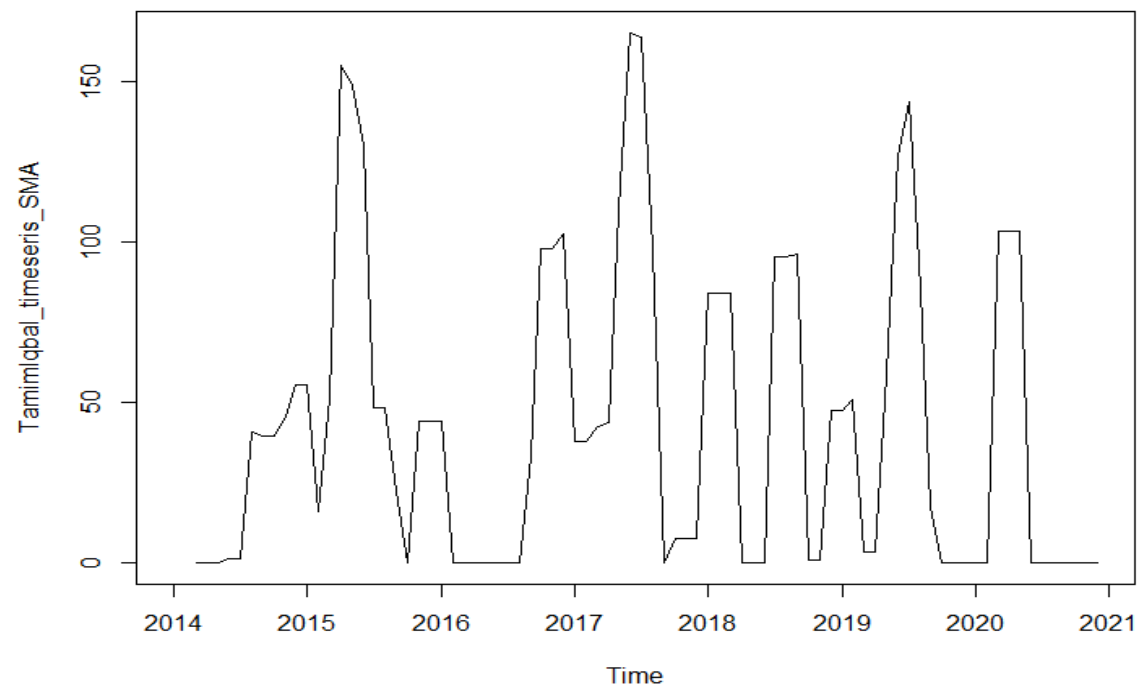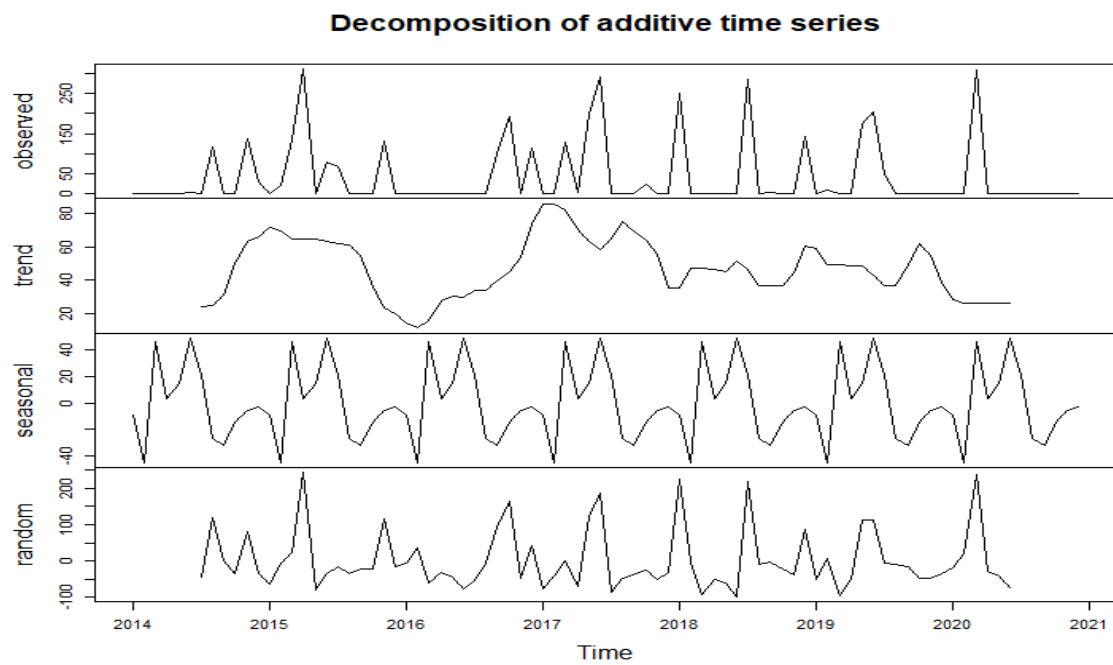
```
> plot(TamimIqbal_timeseris_SMA)
```



```
> TamimIqbal_timeseris_components<-decompose(TamimIqbal_timeseris)
> plot(TamimIqbal_timeseris_components)
```

Decomposition of additive time series

```
****************************** Shakib Al Hasan ******************************
> Shakib<-c(0,0,0,0,0,0,0,88,0,103,0,170,0,302,108,94,55,0,17,0,0,0,0,31,0,0,
79,0,0,0,0,0,0,0,0,0,0,27,64,0,0,56,0,0,0,0,142,0,0,109,87,38,0,123,48,0,0,0,
16,0,0,0,0,0,0,0,0,0,65,103,0,84,0,0,72,54,39,168,0,0,0,97,0,0,63,0,0,0,0,0,1
90,0,49,0,0,95,0,0,0,0,140,476,130,0,0,0,0,0)
> print(Shakib)
  [1]    0    0    0    0    0    0    0   88    0  103    0  170    0  302  108   94   55
 [18]    0   17    0    0    0    0   31    0    0   79    0    0    0    0    0    0    0
 [35]    0    0    0   27   64    0    0   56    0    0    0    0  142    0    0  109   87
 [52]   38    0  123   48    0    0    0   16    0    0    0    0    0    0    0    0    0
 [69]   65  103    0   84    0    0   72   54   39  168    0    0    0   97    0    0   63
 [86]    0    0    0    0    0  190    0   49    0    0   95    0    0    0    0  140  476
[103]  130    0    0    0    0    0
> Shakib_timeseris<-ts(Shakib,start=c(2014,1),frequency = 12)
> print(Shakib_timeseris)
     Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2014   0   0   0   0   0   0   0  88   0 103   0 170
2015   0 302 108  94  55   0  17   0   0   0   0  31
2016   0   0  79   0   0   0   0   0   0   0   0   0
2017   0  27  64   0   0  56   0   0   0   0 142   0
2018   0 109  87  38   0 123  48   0   0   0  16   0
2019   0   0   0   0   0   0   0   0  65 103   0  84
2020   0   0  72  54  39 168   0   0   0  97   0   0
2021  63   0   0   0   0   0 190   0  49   0   0  95
2022   0   0   0   0 140 476 130   0   0   0   0   0
> plot.ts(Shakib_timeseris)
```
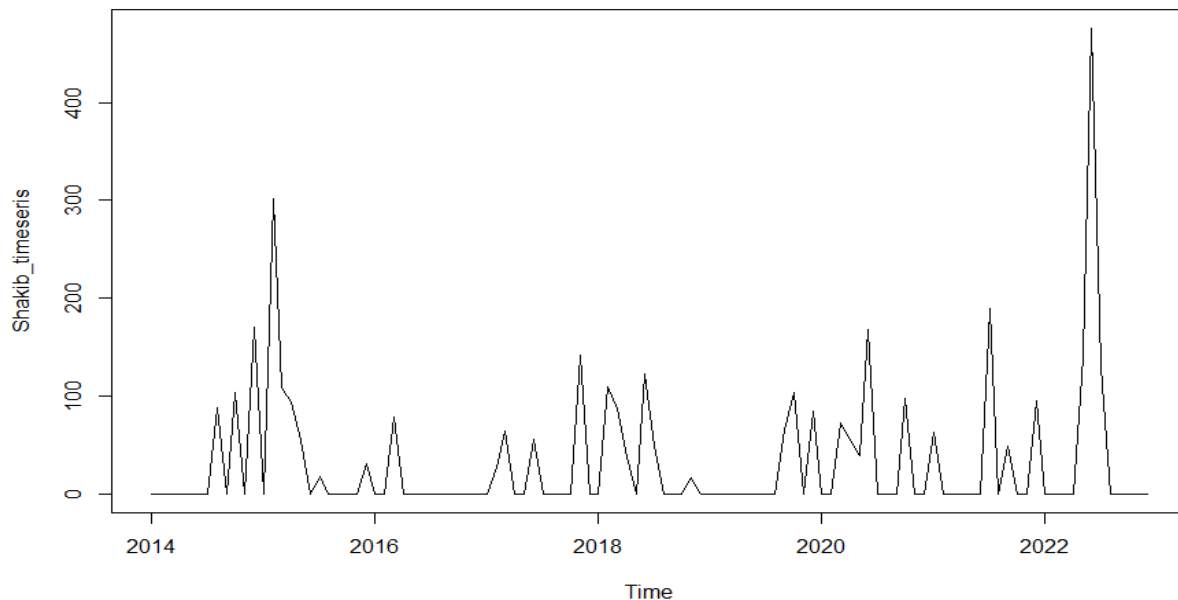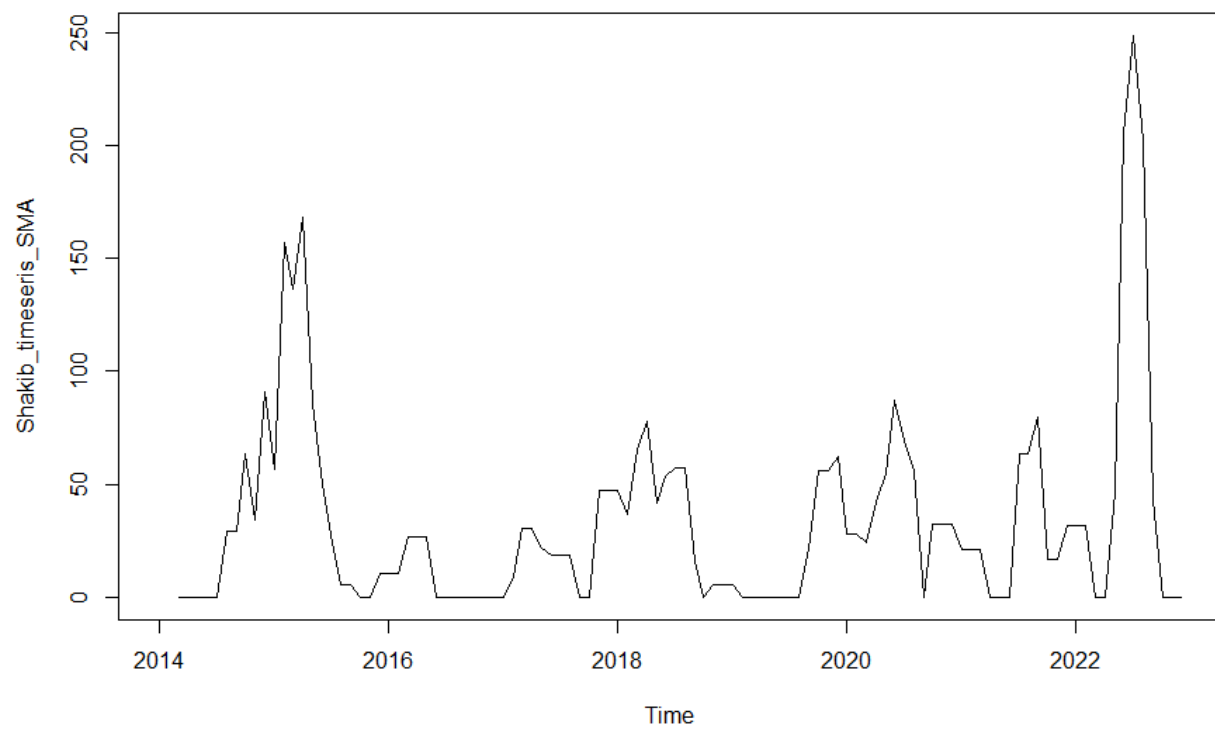


```
> library(TTR)
> Shakib_timeseris_SMA<-SMA(Shakib_timeseris,n=3)
> plot(Shakib_timeseris_SMA)
```

```
> Shakib_timeseris_components<-decompose(Shakib_timeseris)
> plot(Shakib_timeseris_components)
```


Decomposition of additive time series