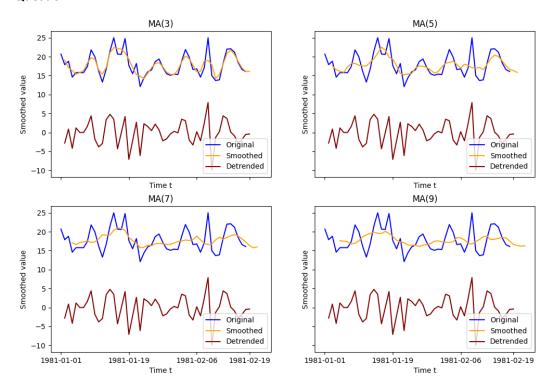
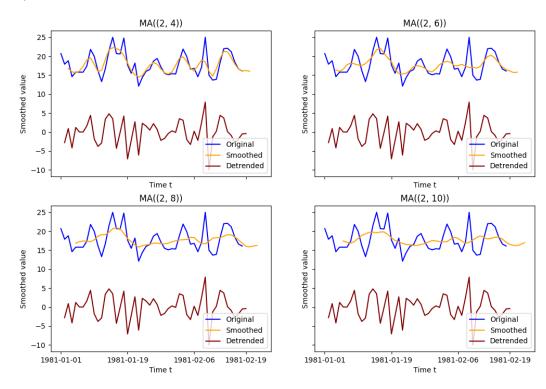
### Time Series Homework3

# Rajkumar Conjeevaram Mohan

# Question 2



### Question 3



### Question 4

## ADF of the original data

ADF Statistic: -4.444805 p-value: 0.000247

Critical Values:

1%: -3.432 5%: -2.862 10%: -2.567

### ADF of the original data using MA

ADF Statistic: -3.751657 p-value: 0.003443

**Critical Values:** 

1%: -3.432 5%: -2.862 10%: -2.567

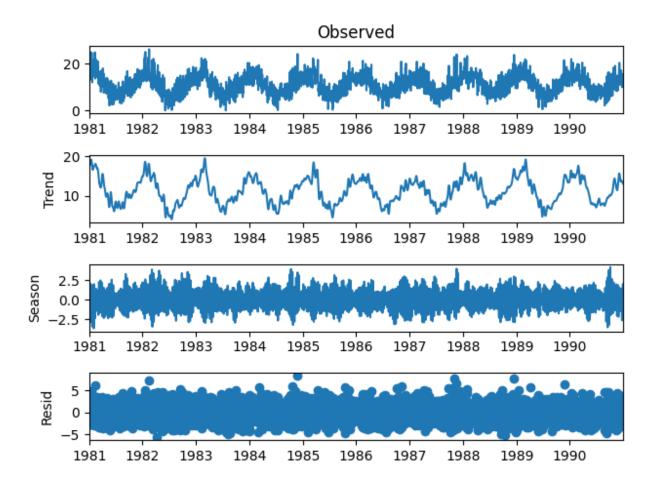
# ADF of the de-trended data using MA

ADF Statistic: -14.062023 p-value: 0.000000

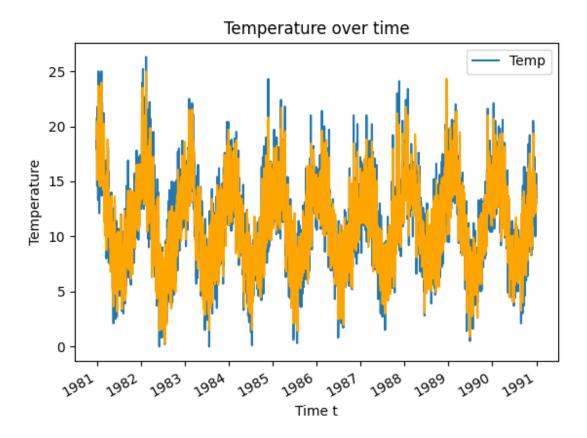
**Critical Values:** 

1%: -3.432 5%: -2.862 10%: -2.567

### Question 5



Question 6 - Seasonally adjusted data



### Question 7

Strength of the trend 76.79

# Question 8 Strength of the seasonality 34.65

### Question 9

The data appears strongly seasonal given its presence even after the adjustment.