**Code1:**

library(forecast)

x<- read.csv("C:/Users/user/Desktop/weather/VW.csv")

View(x)

print(is.ts(x$average))

x$average<-ts(x$average,start=c(1988,1),end=c(2013,4),frequency = 4)

xaverage<-diff(x$average)

plot(xaverage)

#xaverage\_subset<-window(xaverage,start=c(2001,1),end=c(2012,4))

fit\_diff\_400<-Arima(xaverage,order=c(4,0,0))

plot(forecast(fit\_diff\_400,h=10))

plot(forecast(fit\_diff\_400,h=10),include=40)

accuracy(fit\_diff\_400)

**Code2:**

wdata<-read.csv("C:/Users/user/Desktop/weather/VW.csv")

View(wdata)

ts.data=ts(wdata$average,frequency=4,start=c(1988,1))

plot(ts.data)

dim(as.matrix(ts.data))

data.train=window(ts.data,start=c(1988,1),end=c(2010,1))

plot(data.train)

dim(as.matrix(data.train))

data.test=window(ts.data,start=c(2011,1))

plot(data.test)

dim(as.matrix(data.test))

library(forecast)

arima1=auto.arima(data.train,trace=TRUE,test="kpss", ic="bic")

summary(arima1)

confint(arima1)

library(tseries)

jarque.bera.test(arima1$residuals)

arima1.forecast=forecast(arima1,h=27)

arima1.forecast

plot(arima1.forecast,xlab="Years",ylab="Temperature")

library(TSPred)

plotarimapred(data.test,arima1,xlim=c(2009,2012),range.percent=0.05)

accuracy(arima1.forecast,data.test)