**23ГМУ-ЖКХ21 Романов Даниил**

**Контрольная точка №2**

**Ссылка на posit Cloud:**

<https://posit.cloud/content/6793909>

**Ссылка на github:**

**Код:**

library(readxl)

D<-read\_excel("problems\_1.xlsx")

Data<-data.frame(D$AdmArea[2:length(D$AdmArea)],D$Month[2:length(D$Month)],

as.numeric(D$Year[2:length(D$Year)]),

as.numeric(D$TotalAmount[2:length(D$TotalAmount)]))

colnames(Data)<-c("AdmArea","Month","Year","TotalAmount")

View(Data)

Data2<-subset(Data,Data$Year<=2019)

rpivotTable::rpivotTable(Data2,rows="AdmArea",cols="Year",

vals="TotalAmount",aggregatorName = "Average")

Data3<-subset(Data,Data$Year==2021)

rpivotTable::rpivotTable(Data3,rows="Month",

vals="TotalAmount",aggregatorName = "Sum")

Data3<-rpivotTable::rpivotTable(Data2,rows="Year",

vals="TotalAmount",

aggregatorName = "Average")

View(Data3)

Dcenter<-subset(Data,Data$AdmArea=="Центральный административный округ")

View(Dcenter)

Current<-data.frame()

for (i in c(2016:2021)) Current<-rbind(Current,mean(Dcenter$TotalAmount[Dcenter$Year==i]))

Current<-data.frame(Current,c(2016:2021))

colnames(Current)<-c("Total","Year")

View(Current)

DAvg<-rpivotTable::rpivotTable(Dcenter,rows="Year",vals="TotalAmount", aggregatorName = "Average")

View(DAvg)

result<-data.frame()

for (i in Current$Year)

{

j<-as.vector(Dcenter$Month[(Dcenter$Year==i) & (Dcenter$TotalAmount>=Current$Total[Current$Year==i])])

print(c(i,j))

for (k in j) {result<-rbind(result, c(i,k), stringsAsFactors=FALSE)}

}

colnames(result)<-c("Year","Month")

View(result)

result<-data.frame(as.numeric(result$Year),as.character(result$Month),stringsAsFactors = FALSE)

colnames(result)<-c("Year","Month")

View(result)

save(Dcenter,result,file="RomanovKT2.dat")

load("RomanovKT2.dat")

View(Dcenter)

