Assighnment1

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R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see http://rmarkdown.rstudio.com.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
#-----------------------------------------------------------------------------------------------------------
#
#
#              PROGRAM FOR LISTING TOP 5 LIBRARIES WITH HIGHEST AVERAGE TOTAL OPERATING REVENUE
#
#
#-----------------------------------------------------------------------------------------------------------


#DATASETS USED[2012,2013,2014,2015,2016,2017]
#Reading and writing CSV data files into 6 different objects[data_2012,data_2013,data_2014,data_2015,da
    data_2012 <- read.csv("ontario_public_library_statistics_2012_open_data_may_22_2015_csv_final_9.csv
    data_2013 <- read.csv("ontario_public_library_statistics_2013_open_data_may_22_2015_csv_final.csv",
    data_2014 <- read.csv("ontario_public_library_statistics_2014_open_data_csv_february_17_2016.csv",f
    data_2015 <- read.csv("2015_ontario_public_library_statistics_open_data_dec_2017rev.csv",fileEncodi
    data_2016 <- read.csv("ontario_public_library_statistics_open_data_2016.csv",fileEncoding = "latin1
    data_2017 <- read.csv("ontario_public_library_statistics_open_data_july_2019_rev1.csv",fileEncoding

#Checking the filed names for ensuring similarity.As the name is different change into common column na
    #attributes(data_2012)
    #attributes(data_2013)
    #attributes(data_2014)
    #attributes(data_2015)
    #attributes(data_2016)
    #attributes(data_2017)
    colnames(data_2012)[colnames(data_2012) == "B2.9...Total.Operating.Revenues"] <- "B2.9..Total.Opera
    colnames(data_2013)[colnames(data_2013) == "B2.9...Total.Operating.Revenues"] <- "B2.9..Total.Opera

#Finding the common columns and append the objects vertically into single object.
    common_columns <- Reduce(intersect, list(colnames(data_2012),colnames(data_2013),colnames(data_2014
    #print(common_columns)
    data_combined <- rbind(subset(data_2012, select = common_columns),subset(data_2013, select = common
                        subset(data_2014,select=common_columns),subset(data_2015,select=common_columns),
                        subset(data_2016,select=common_columns),subset(data_2017, select=common_columns)
```

```
##Getting average of total operating Revenue
    str(data_combined)# looking for the datatypes of the column name
    #print(data_combined$B2.9..Total.Operating.Revenues)
    data_combined$B2.9..Total.Operating.Revenues <-
              gsub("[^0-9.-]", "", data_combined$B2.9..Total.Operating.Revenues)#checking for any chara
    data_combined$B2.9..Total.Operating.Revenues <-
              as.numeric(data_combined$B2.9..Total.Operating.Revenues)# Converting character data type
    #print(data_combined$B2.9..Total.Operating.Revenues)

#Finding the Average and assign to object Aggregate_result
    aggregate_result<- aggregate(B2.9..Total.Operating.Revenues ~ Library.Full.Name,data=data_combined,
    #print(aggregate_result)


# Sort the object to list top5 libraries having high Total Operating Revenue
    top_5 <- aggregate_result[order(-aggregate_result$B2.9..Total.Operating.Revenues),][1:5,]
    print(top_5)


#Generating data in table format
    #install.packages("pander")
    library(pander)
    pander(top_5)
```

Including Plots

You can also embed plots, for example:

Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.