Capstone Project - Initial Results and Code

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setwd("C:/Users/Arasan/Documents/Arasan/School/Ryerson/CKME 136- Capstone")  
getwd()

## [1] "C:/Users/Arasan/Documents/Arasan/School/Ryerson/CKME 136- Capstone"

GDPdata <- read.csv(file="GDPDataProcessed.csv", header=TRUE, sep=",")  
  
  
#-------  
  
# Apply PCA on the variables of GDPdata  
data(GDPdata)

## Warning in data(GDPdata): data set 'GDPdata' not found

#is.na(GDPdata)  
#check=sum(is.na(GDPdata))  
#class(GDPdata\_x$GDPinUSDInMillions)  
GDPdata\_x <-GDPdata[,3:57]  
GDPdata\_x <- na.omit(GDPdata\_x)  
# Splitting the GDPdata dataset into training and test set.  
train\_index <- sample(1:nrow(GDPdata\_x), 0.7 \* nrow(GDPdata\_x))  
GDPdata.train.set <-GDPdata\_x[train\_index,]  
GDPdata.test.set <- GDPdata\_x[-train\_index,]  
  
  
#Calculating PCAs from raw data  
  
GDPdataTrainSet.pca.rawdata <- prcomp(GDPdata.train.set, scale = FALSE, center= FALSE)  
GDPdataTrainSet.pca.rawdata

## Standard deviations (1, .., p=55):  
## [1] 6.685796e+06 2.807644e+04 4.457810e+03 2.627803e+03 1.093727e+03  
## [6] 4.018791e+02 3.637564e+02 1.905887e+02 1.136132e+02 5.933198e+01  
## [11] 5.685809e+01 2.786593e+01 1.991785e+01 1.575962e+01 1.159958e+01  
## [16] 9.797677e+00 8.108792e+00 7.097683e+00 5.680249e+00 4.978453e+00  
## [21] 4.484686e+00 3.612234e+00 3.482092e+00 2.872508e+00 2.433773e+00  
## [26] 1.776199e+00 1.369354e+00 1.211865e+00 1.033984e+00 8.539076e-01  
## [31] 7.182186e-01 6.492930e-01 6.269717e-01 5.125663e-01 4.173005e-01  
## [36] 3.574307e-01 3.121753e-01 3.039401e-01 2.945719e-01 2.605531e-01  
## [41] 2.378123e-01 2.295430e-01 2.122063e-01 1.896828e-01 1.641973e-01  
## [46] 1.606038e-01 1.481686e-01 1.242415e-01 1.210557e-01 1.080635e-01  
## [51] 9.990419e-02 8.587131e-02 8.007959e-02 6.905573e-02 3.755385e-02  
##   
## Rotation (n x k) = (55 x 55):  
## PC1 PC2 PC3  
## GDP.USD..In\_Millions. -9.999981e-01 -1.933864e-03 -2.012314e-04  
## MealInexpensive -7.292211e-07 2.122799e-04 2.582049e-04  
## MealFor2 -3.208669e-06 9.761664e-04 1.483554e-03  
## McMealMcDonalds -4.375001e-07 1.620394e-04 9.388060e-05  
## DomesticBeer -2.927320e-07 8.829236e-05 1.513901e-04  
## ImportedBeer -3.473186e-07 1.008721e-04 1.127437e-04  
## CokeOrPepsi -1.034644e-07 3.580753e-05 5.556465e-05  
## Water1Litre -8.101381e-08 2.628137e-05 5.145011e-05  
## Milk1Litre -6.393390e-08 3.184757e-05 4.794446e-05  
## LoafofBread -1.389270e-07 2.954232e-05 7.150069e-05  
## Eggs -1.434225e-07 5.539066e-05 7.236846e-05  
## LocalCheese -7.069169e-07 2.477469e-04 4.475905e-04  
## Water2Litre -8.421776e-08 2.150887e-05 3.185916e-05  
## BottleofWine -7.737631e-07 2.500719e-04 1.576460e-04  
## Domestic1LitreBeer -1.128022e-07 4.214895e-05 1.755356e-05  
## Imported1LitreBeer -1.514269e-07 6.100754e-05 3.095812e-06  
## Cigarettes20Pack -4.835780e-07 1.419545e-04 2.602180e-04  
## OnewayTicket -1.176598e-07 3.313691e-05 7.907678e-05  
## ChickenBreasts -5.182188e-07 1.710356e-04 2.970985e-04  
## MonthlyPass -4.157622e-06 1.121902e-03 2.601267e-03  
## Gasoline1Litre -5.844029e-08 3.430468e-05 2.003381e-05  
## VWGolf -1.353546e-03 6.970107e-01 1.652957e-02  
## Apartment1BD -9.234808e-05 1.883468e-02 6.398633e-02  
## Apartment1BDOOC -6.826316e-05 1.305855e-02 4.649204e-02  
## Apartment3BDICC -1.677096e-04 3.590923e-02 1.315368e-01  
## Apartment3BDOOC -1.167662e-04 2.326155e-02 8.727836e-02  
## BasicUtilities -8.083972e-06 3.206798e-03 2.873818e-03  
## PrepaidMobile1MIn -7.764614e-09 3.401751e-06 3.697786e-06  
## Internet -3.072262e-06 7.109059e-04 3.121071e-04  
## GymFees -2.729684e-06 1.094843e-03 1.558985e-03  
## TennisCourtFeesPerHour -9.809331e-07 4.095912e-04 2.571458e-04  
## CinemaPerPerson -6.967818e-07 2.067117e-04 3.494073e-04  
## PairofJeans -3.230768e-06 1.757201e-03 1.197011e-03  
## SummerDress -2.249728e-06 1.016040e-03 -2.508276e-04  
## NikeRunningShoes -4.838166e-06 2.283454e-03 1.122369e-04  
## LeatherShoes -6.289686e-06 2.555702e-03 2.449305e-03  
## AptPricePerSquareM -3.847125e-04 1.303731e-01 8.062798e-01  
## AptPricePerSqMOOC -2.277353e-04 7.859049e-02 4.947116e-01  
## AvgMnthlyNetSalary -2.078870e-04 3.300528e-02 1.185690e-01  
## MortgageInterest -3.224597e-07 2.212830e-04 -5.873980e-04  
## TaxiStartingFare -1.688498e-07 6.068954e-05 1.194893e-04  
## Taxi1KM -8.455865e-08 2.539640e-05 4.708888e-05  
## Taxi1HRWaiting -1.387751e-06 3.724706e-04 1.160391e-03  
## Apples1KG -2.150513e-07 5.364140e-05 9.516898e-05  
## Oranges1KG -1.780783e-07 4.677412e-05 8.715925e-05  
## Potato1KG -1.228239e-07 3.004899e-05 7.921522e-05  
## Lettuce1Head -7.914806e-08 2.853338e-05 4.479328e-05  
## CappucinoReg -2.253510e-07 6.512708e-05 8.841605e-05  
## WhiteRice -1.943197e-07 3.960942e-05 5.791308e-05  
## Tomato1KG -1.910331e-07 4.829105e-05 1.163974e-04  
## Banana1KG -9.765464e-08 4.174102e-05 5.228549e-05  
## Onion1KG -1.193074e-07 2.984214e-05 6.720631e-05  
## BeefRound1KG -7.529195e-07 2.920060e-04 5.707067e-04  
## ToyotaCorolla -1.294019e-03 6.981353e-01 -2.412875e-01  
## PreschoolperMonth -5.816602e-05 1.138864e-02 3.763657e-02  
## PC4 PC5 PC6  
## GDP.USD..In\_Millions. -1.479293e-06 1.590872e-04 3.959107e-05  
## MealInexpensive -2.887391e-04 -3.120269e-03 -5.108168e-04  
## MealFor2 -9.563000e-04 -1.158860e-02 -1.441801e-03  
## McMealMcDonalds -1.793513e-04 -1.325190e-03 -1.133411e-05  
## DomesticBeer -1.059086e-04 -9.010344e-04 -3.473000e-04  
## ImportedBeer -1.224619e-04 -6.613088e-04 -4.998512e-04  
## CokeOrPepsi -5.063437e-05 -4.794406e-04 9.599271e-06  
## Water1Litre -3.528434e-05 -4.318503e-04 3.971786e-05  
## Milk1Litre 7.003764e-06 1.765757e-05 -7.286807e-05  
## LoafofBread -1.957867e-05 -3.259684e-04 -1.805173e-04  
## Eggs -3.276498e-05 -4.387596e-04 8.286555e-05  
## LocalCheese -1.641152e-05 -4.425473e-04 2.439812e-04  
## Water2Litre -1.552510e-05 -2.303574e-04 -5.841512e-05  
## BottleofWine -4.633280e-05 -3.438257e-05 -1.319634e-03  
## Domestic1LitreBeer -2.715861e-05 -2.635188e-04 -3.765416e-04  
## Imported1LitreBeer -6.097809e-05 -1.699093e-04 -3.003910e-04  
## Cigarettes20Pack -2.354878e-04 -2.323169e-03 -5.451854e-04  
## OnewayTicket -3.537771e-05 -6.512076e-04 -2.684006e-04  
## ChickenBreasts -2.172516e-04 -1.994511e-03 -7.437643e-04  
## MonthlyPass -4.255741e-04 -1.733394e-02 -4.803841e-03  
## Gasoline1Litre -3.655973e-05 -1.055477e-04 1.836140e-04  
## VWGolf 7.165120e-01 -1.328689e-02 1.554929e-02  
## Apartment1BD -2.037909e-02 -2.367988e-01 3.135234e-02  
## Apartment1BDOOC -1.696398e-02 -2.122702e-01 7.375766e-02  
## Apartment3BDICC -3.857493e-02 -3.312208e-01 5.345067e-02  
## Apartment3BDOOC -2.869106e-02 -3.070444e-01 1.516279e-01  
## BasicUtilities -1.147794e-03 -2.271457e-02 2.502873e-02  
## PrepaidMobile1MIn 1.620473e-06 -4.338208e-05 -8.222415e-06  
## Internet -1.823779e-04 -1.021948e-02 -1.715488e-03  
## GymFees 1.762279e-04 -3.572396e-03 -4.869284e-03  
## TennisCourtFeesPerHour -2.891133e-04 -2.600498e-03 -4.203751e-04  
## CinemaPerPerson -1.354021e-04 -1.965345e-03 -2.998948e-04  
## PairofJeans -9.535381e-04 -8.084322e-03 7.875423e-03  
## SummerDress -7.528338e-04 -2.884991e-03 2.468930e-03  
## NikeRunningShoes -2.194082e-04 -7.980035e-03 7.120416e-03  
## LeatherShoes -6.388820e-04 -1.434604e-02 4.521605e-03  
## AptPricePerSquareM -1.286902e-01 3.120982e-01 -4.465232e-01  
## AptPricePerSqMOOC -1.105542e-01 -1.021547e-01 7.718885e-01  
## AvgMnthlyNetSalary -4.425464e-02 -7.256342e-01 -4.128731e-01  
## MortgageInterest -1.333902e-04 8.633367e-04 2.328093e-03  
## TaxiStartingFare -1.060443e-04 -6.420261e-04 -4.586690e-04  
## Taxi1KM -3.569255e-05 -4.235806e-04 -1.345801e-04  
## Taxi1HRWaiting -7.407307e-04 -7.973027e-03 -3.599875e-03  
## Apples1KG -5.537912e-05 -2.642527e-04 -7.347040e-04  
## Oranges1KG -2.454853e-05 -3.053353e-04 -6.916789e-04  
## Potato1KG 1.272986e-06 -3.121966e-04 -2.082030e-04  
## Lettuce1Head -1.439600e-05 -2.655546e-04 -3.064877e-04  
## CappucinoReg -5.671107e-05 -3.331982e-04 -1.696213e-04  
## WhiteRice -1.278406e-05 -3.811211e-04 -4.292899e-04  
## Tomato1KG -2.074416e-05 -5.325102e-04 -4.450680e-04  
## Banana1KG -1.206428e-05 -1.956225e-04 -1.360492e-04  
## Onion1KG -4.515616e-06 -2.665376e-04 -2.089586e-04  
## BeefRound1KG -8.562939e-05 -1.950800e-03 -2.778230e-03  
## ToyotaCorolla -6.726358e-01 4.258643e-02 -9.206516e-03  
## PreschoolperMonth -2.024866e-02 -2.387325e-01 -2.989879e-02  
## PC7 PC8 PC9  
## GDP.USD..In\_Millions. -2.899414e-05 1.122910e-05 -1.050963e-06  
## MealInexpensive -6.796630e-04 1.936384e-03 1.063200e-04  
## MealFor2 -1.373641e-03 2.181085e-03 2.224449e-03  
## McMealMcDonalds -6.698173e-04 4.082803e-04 7.312670e-04  
## DomesticBeer -4.225051e-04 -6.676511e-04 4.344050e-05  
## ImportedBeer -2.042011e-04 -1.305160e-03 9.636419e-04  
## CokeOrPepsi -4.409710e-04 -9.604287e-05 3.487908e-04  
## Water1Litre -4.093580e-04 -1.060070e-04 1.175425e-04  
## Milk1Litre 3.880898e-05 1.005300e-04 9.294533e-04  
## LoafofBread -3.320035e-05 -3.791644e-04 2.018718e-04  
## Eggs -2.047729e-04 3.306320e-04 7.729340e-04  
## LocalCheese -6.082872e-04 3.655607e-03 4.774312e-03  
## Water2Litre 1.895671e-05 -4.345654e-04 2.184969e-05  
## BottleofWine 7.773466e-04 -2.133681e-04 9.186984e-03  
## Domestic1LitreBeer -1.267605e-04 -2.694526e-04 1.177449e-03  
## Imported1LitreBeer 6.073431e-05 9.118423e-05 1.858028e-03  
## Cigarettes20Pack -7.990448e-04 2.185726e-04 1.492463e-03  
## OnewayTicket -4.393029e-04 -1.628880e-04 1.836392e-04  
## ChickenBreasts -1.391819e-03 4.078763e-04 2.152728e-03  
## MonthlyPass -4.337054e-03 5.166503e-03 1.453596e-02  
## Gasoline1Litre -2.256062e-05 -8.470136e-05 -7.974082e-06  
## VWGolf -8.209572e-03 3.195051e-03 1.174968e-03  
## Apartment1BD 2.902669e-01 2.829021e-02 -2.736589e-01  
## Apartment1BDOOC 1.638476e-01 -3.179397e-03 -5.500109e-01  
## Apartment3BDICC 6.629780e-01 -1.300061e-01 6.072049e-01  
## Apartment3BDOOC 3.063983e-01 -1.008161e-01 -4.624706e-01  
## BasicUtilities -2.066910e-02 -2.323947e-02 4.592826e-02  
## PrepaidMobile1MIn 7.262785e-07 1.482715e-05 1.523520e-04  
## Internet 4.042764e-03 -9.488470e-03 1.905023e-02  
## GymFees 7.046357e-03 -9.666690e-04 2.909673e-02  
## TennisCourtFeesPerHour -2.230447e-05 6.011707e-03 6.136166e-03  
## CinemaPerPerson -8.861485e-04 -4.732013e-05 2.140911e-03  
## PairofJeans 5.470084e-04 1.276938e-02 1.419148e-02  
## SummerDress 1.486552e-04 2.233214e-03 1.739391e-02  
## NikeRunningShoes 2.677558e-03 8.359271e-03 3.814405e-02  
## LeatherShoes 1.041979e-03 9.218913e-03 4.117206e-02  
## AptPricePerSquareM 1.005551e-01 3.091952e-02 -8.317863e-02  
## AptPricePerSqMOOC -3.332869e-01 -2.662515e-02 1.138476e-01  
## AvgMnthlyNetSalary -4.833111e-01 -2.060025e-01 9.144795e-02  
## MortgageInterest 1.083213e-03 2.021019e-03 4.970929e-03  
## TaxiStartingFare -7.565190e-05 1.462479e-04 9.687437e-04  
## Taxi1KM -2.461039e-04 3.751355e-04 8.385380e-04  
## Taxi1HRWaiting -7.330196e-03 2.631474e-03 3.416604e-03  
## Apples1KG -2.311166e-04 -5.590182e-04 2.395760e-03  
## Oranges1KG -1.688298e-04 -3.606724e-04 1.854958e-03  
## Potato1KG -1.085240e-04 -1.904007e-04 1.373602e-03  
## Lettuce1Head -9.814306e-05 -2.807000e-04 5.796420e-04  
## CappucinoReg -1.911874e-04 -2.318070e-04 1.184426e-03  
## WhiteRice -3.406432e-04 -6.717019e-04 1.235429e-04  
## Tomato1KG -1.463787e-04 -2.055955e-04 4.930218e-04  
## Banana1KG -2.198764e-04 1.338095e-04 9.980969e-04  
## Onion1KG 7.102540e-06 -1.442344e-04 1.224817e-03  
## BeefRound1KG -3.450603e-03 4.725901e-03 9.754512e-03  
## ToyotaCorolla -5.295434e-03 -2.589960e-03 -2.655100e-03  
## PreschoolperMonth -2.654169e-03 9.627714e-01 6.533470e-02  
## PC10 PC11 PC12  
## GDP.USD..In\_Millions. 2.197309e-06 -2.297294e-06 5.585915e-07  
## MealInexpensive -3.840744e-03 -2.274186e-02 2.519939e-02  
## MealFor2 -2.495196e-03 -1.044003e-01 1.401075e-01  
## McMealMcDonalds -3.734316e-03 -1.589214e-02 2.114246e-02  
## DomesticBeer 1.904375e-03 -1.850870e-03 3.908435e-03  
## ImportedBeer 1.737525e-03 -1.223399e-03 8.710628e-03  
## CokeOrPepsi -5.431390e-04 -5.428732e-03 1.154152e-03  
## Water1Litre 1.579351e-04 -3.934697e-03 1.017836e-03  
## Milk1Litre -1.326656e-03 -1.552375e-03 5.855859e-03  
## LoafofBread -7.923099e-04 -1.364637e-03 6.471164e-03  
## Eggs -2.477039e-03 -5.235712e-03 5.927746e-03  
## LocalCheese -1.528301e-02 -1.356060e-02 2.769831e-02  
## Water2Litre 6.996775e-04 -6.624795e-04 5.112502e-03  
## BottleofWine -9.238774e-03 8.524065e-03 2.797922e-02  
## Domestic1LitreBeer 8.896026e-04 1.600839e-03 4.387779e-03  
## Imported1LitreBeer -4.998173e-04 -1.121272e-05 9.018581e-03  
## Cigarettes20Pack 1.101380e-02 -2.332792e-03 3.194832e-03  
## OnewayTicket 7.390742e-04 -3.963555e-03 3.581721e-04  
## ChickenBreasts -7.887066e-03 -1.225802e-02 3.267989e-02  
## MonthlyPass 5.340855e-02 -7.621759e-02 -2.295737e-02  
## Gasoline1Litre -7.117745e-04 -4.493343e-03 1.179121e-03  
## VWGolf 1.444988e-04 3.419294e-03 -1.083556e-03  
## Apartment1BD 6.900576e-01 -1.113060e-01 2.484393e-01  
## Apartment1BDOOC 2.093453e-01 -1.960601e-02 -2.684953e-01  
## Apartment3BDICC -2.288296e-03 5.778069e-02 -9.978185e-02  
## Apartment3BDOOC -6.691474e-01 2.845353e-02 9.841947e-02  
## BasicUtilities -5.468171e-02 -8.199920e-01 -5.102311e-01  
## PrepaidMobile1MIn -3.783901e-05 -3.010259e-04 3.679719e-04  
## Internet -6.294307e-03 -2.981347e-02 1.051346e-01  
## GymFees -3.228007e-02 -6.738411e-02 1.004666e-01  
## TennisCourtFeesPerHour -9.357788e-03 -6.147650e-02 8.397809e-02  
## CinemaPerPerson -4.353671e-04 -2.157266e-02 2.108054e-02  
## PairofJeans -3.198563e-02 -2.837643e-01 2.158235e-01  
## SummerDress -2.581386e-02 -1.052727e-01 2.282311e-01  
## NikeRunningShoes -4.758327e-02 -2.485544e-01 4.714966e-01  
## LeatherShoes -8.407935e-02 -3.530197e-01 4.451361e-01  
## AptPricePerSquareM -3.217926e-02 -2.206394e-02 -3.899658e-03  
## AptPricePerSqMOOC 6.796172e-02 3.300792e-02 9.340807e-03  
## AvgMnthlyNetSalary 5.915585e-03 2.957863e-02 3.533290e-03  
## MortgageInterest -5.210098e-03 -6.267131e-03 9.495954e-02  
## TaxiStartingFare -8.162402e-04 -8.645628e-03 6.578966e-03  
## Taxi1KM -9.695163e-04 -2.992066e-03 2.528932e-03  
## Taxi1HRWaiting 5.327774e-03 -3.991339e-02 4.637901e-02  
## Apples1KG -2.723977e-03 -3.695143e-04 4.272321e-03  
## Oranges1KG -1.187684e-03 -3.630825e-03 3.389062e-03  
## Potato1KG -1.734621e-03 -1.518546e-04 1.374000e-03  
## Lettuce1Head -1.202243e-04 -2.509214e-03 4.900497e-03  
## CappucinoReg -6.582843e-04 -5.005072e-03 8.394579e-03  
## WhiteRice -1.198017e-03 -3.358410e-03 5.188742e-03  
## Tomato1KG -1.082921e-04 -6.256412e-03 3.797497e-03  
## Banana1KG -8.943547e-04 -3.589953e-03 3.378422e-03  
## Onion1KG -4.462248e-04 -1.005784e-03 1.198666e-03  
## BeefRound1KG -2.372964e-02 -2.336742e-02 3.916382e-02  
## ToyotaCorolla 4.369233e-05 2.074286e-03 -9.746644e-04  
## PreschoolperMonth -8.553899e-02 1.269293e-02 -3.452319e-02  
## PC13 PC14 PC15  
## GDP.USD..In\_Millions. -1.701740e-06 5.207321e-07 6.639190e-07  
## MealInexpensive -1.693673e-02 2.344344e-02 1.488885e-02  
## MealFor2 -7.981459e-02 1.607558e-01 4.410848e-02  
## McMealMcDonalds -1.073038e-02 2.273157e-02 -1.050029e-02  
## DomesticBeer -1.517691e-02 1.990422e-02 4.965561e-03  
## ImportedBeer -1.902046e-02 1.939523e-02 -1.115035e-02  
## CokeOrPepsi 7.070563e-04 4.671243e-03 9.457894e-03  
## Water1Litre 1.368627e-03 4.475201e-03 7.200574e-03  
## Milk1Litre -4.347973e-03 1.786571e-03 -8.757880e-03  
## LoafofBread -3.959103e-03 4.217748e-03 -3.239610e-03  
## Eggs -5.274705e-03 5.116289e-03 -7.210475e-03  
## LocalCheese 6.055449e-03 -5.248376e-03 -1.824723e-02  
## Water2Litre -5.033814e-03 6.022539e-03 -6.907839e-03  
## BottleofWine -5.664499e-02 3.249208e-02 -6.799020e-02  
## Domestic1LitreBeer -1.219186e-02 1.291332e-02 -1.460066e-02  
## Imported1LitreBeer -1.530129e-02 1.553784e-02 -1.928982e-02  
## Cigarettes20Pack -3.498571e-02 6.802837e-02 -1.251694e-02  
## OnewayTicket -5.757628e-03 1.393184e-02 1.645798e-02  
## ChickenBreasts -8.731222e-04 8.810407e-03 -1.977242e-02  
## MonthlyPass -2.877878e-01 7.670644e-01 3.759529e-01  
## Gasoline1Litre -1.299118e-03 4.188042e-04 1.345318e-03  
## VWGolf 9.491720e-05 -4.975378e-04 4.097354e-04  
## Apartment1BD 4.586125e-01 1.196403e-01 -2.875425e-02  
## Apartment1BDOOC -6.629527e-01 -2.411688e-01 -1.684389e-02  
## Apartment3BDICC -1.525220e-01 -6.884156e-02 1.860290e-02  
## Apartment3BDOOC 2.755922e-01 1.408861e-01 1.446904e-02  
## BasicUtilities 1.713729e-01 2.860997e-02 -1.268877e-01  
## PrepaidMobile1MIn -1.035941e-03 1.842637e-03 -4.469668e-04  
## Internet -1.815890e-01 4.350023e-01 -5.279695e-01  
## GymFees -6.549448e-02 4.497090e-02 -4.729540e-01  
## TennisCourtFeesPerHour -2.495187e-02 5.154132e-02 5.273804e-02  
## CinemaPerPerson -2.880980e-02 3.712728e-02 4.547055e-03  
## PairofJeans -7.220978e-02 -1.189999e-01 3.375817e-01  
## SummerDress -1.123630e-01 -4.828613e-02 -1.834095e-01  
## NikeRunningShoes -2.200751e-01 -4.846076e-02 -1.861791e-01  
## LeatherShoes -1.353392e-01 -2.290362e-01 2.256087e-01  
## AptPricePerSquareM -2.637926e-03 2.954177e-03 -9.790006e-04  
## AptPricePerSqMOOC -6.626088e-04 -3.636508e-03 -1.633480e-03  
## AvgMnthlyNetSalary 8.029470e-03 -1.866910e-02 -1.273552e-03  
## MortgageInterest -3.780977e-02 -5.789119e-02 -1.408886e-01  
## TaxiStartingFare -3.961318e-03 1.261370e-02 2.170321e-02  
## Taxi1KM -7.831962e-04 9.853976e-03 -5.066256e-03  
## Taxi1HRWaiting -3.087964e-02 8.961001e-02 2.683733e-01  
## Apples1KG -1.041287e-02 9.336518e-03 -1.688002e-02  
## Oranges1KG -4.684954e-03 2.699129e-03 -9.772637e-03  
## Potato1KG -6.459296e-03 4.426020e-03 -9.994167e-03  
## Lettuce1Head -4.931541e-03 5.004192e-04 -3.102295e-03  
## CappucinoReg -5.910980e-03 8.062623e-03 -9.665947e-03  
## WhiteRice -7.836452e-03 4.801900e-03 -9.739775e-03  
## Tomato1KG -9.610181e-03 -8.229697e-04 -2.417032e-03  
## Banana1KG -5.091720e-03 1.787330e-03 -2.389696e-03  
## Onion1KG -5.446574e-03 4.055212e-03 -1.094935e-02  
## BeefRound1KG -1.386054e-02 -2.668735e-02 -7.329515e-03  
## ToyotaCorolla 4.693634e-04 4.960531e-04 1.711434e-04  
## PreschoolperMonth 3.152825e-03 1.498419e-03 -1.165473e-02  
## PC16 PC17 PC18  
## GDP.USD..In\_Millions. 6.841432e-07 6.362044e-07 -2.474785e-07  
## MealInexpensive 6.667043e-02 -6.731029e-03 -5.306034e-02  
## MealFor2 3.510196e-01 6.737413e-02 -1.716444e-01  
## McMealMcDonalds 2.867550e-02 2.955967e-02 -4.633337e-02  
## DomesticBeer 1.780033e-02 2.335567e-02 -1.379807e-02  
## ImportedBeer 9.909691e-03 3.174940e-02 -1.688708e-02  
## CokeOrPepsi 1.221684e-02 -1.383673e-03 -1.289740e-02  
## Water1Litre 6.588184e-03 -1.553711e-03 -9.424600e-03  
## Milk1Litre 3.699271e-03 -2.791149e-03 1.000593e-02  
## LoafofBread 1.012040e-02 -5.943172e-03 2.581789e-03  
## Eggs 9.839817e-03 -6.895715e-04 -1.191508e-02  
## LocalCheese 7.647709e-02 -2.902849e-02 1.353952e-02  
## Water2Litre 3.799348e-03 -5.369599e-03 7.250404e-03  
## BottleofWine 5.565004e-03 4.436246e-02 2.083041e-02  
## Domestic1LitreBeer -9.935276e-03 1.086477e-02 -1.493857e-03  
## Imported1LitreBeer -6.794830e-03 2.081601e-02 -1.221416e-02  
## Cigarettes20Pack -8.335972e-02 1.171517e-02 -4.765066e-02  
## OnewayTicket 6.977131e-03 -4.467400e-03 -1.748343e-02  
## ChickenBreasts 4.959296e-02 -1.910408e-02 -3.219912e-02  
## MonthlyPass -2.786832e-01 1.536856e-01 2.195439e-01  
## Gasoline1Litre 4.407720e-03 -2.015304e-03 -6.153318e-03  
## VWGolf 3.291745e-04 -1.548282e-04 -3.581240e-04  
## Apartment1BD -1.482383e-02 5.327368e-03 2.118332e-02  
## Apartment1BDOOC 4.274216e-02 2.284719e-03 -4.543429e-03  
## Apartment3BDICC 8.371621e-03 -6.711698e-03 -1.105406e-02  
## Apartment3BDOOC -3.422784e-02 3.091028e-03 1.610392e-04  
## BasicUtilities -5.581199e-02 -5.287866e-02 1.436170e-02  
## PrepaidMobile1MIn 1.331747e-03 -6.638938e-04 1.253419e-04  
## Internet 4.019658e-01 -4.448696e-01 -9.436843e-02  
## GymFees 1.303233e-01 7.679972e-01 2.883305e-02  
## TennisCourtFeesPerHour 1.363244e-01 2.637162e-01 2.913399e-02  
## CinemaPerPerson 3.218604e-02 2.357506e-02 -2.954935e-02  
## PairofJeans 8.240460e-02 1.544179e-01 -5.515247e-01  
## SummerDress -2.641687e-01 1.310205e-01 6.808211e-02  
## NikeRunningShoes -5.056974e-01 -2.022514e-01 -2.744226e-01  
## LeatherShoes 3.239696e-01 -1.045518e-01 6.245891e-01  
## AptPricePerSquareM -2.583882e-03 -3.914479e-03 -8.883911e-04  
## AptPricePerSqMOOC 4.866212e-03 4.489478e-03 1.390304e-03  
## AvgMnthlyNetSalary -7.325674e-03 -9.900583e-05 -2.165347e-03  
## MortgageInterest -2.007895e-01 -1.023525e-01 1.011152e-01  
## TaxiStartingFare 3.575037e-02 -3.811551e-03 -2.283876e-02  
## Taxi1KM 2.143515e-02 -5.843107e-03 3.139370e-03  
## Taxi1HRWaiting 2.935632e-01 -2.267522e-02 -3.242214e-01  
## Apples1KG 6.414381e-03 2.172192e-03 2.256279e-02  
## Oranges1KG 6.803229e-03 -6.569795e-03 2.624895e-02  
## Potato1KG 7.459463e-03 -8.320956e-03 1.373012e-02  
## Lettuce1Head 8.068110e-03 -2.532879e-03 5.808169e-03  
## CappucinoReg 1.151927e-02 3.207551e-03 -4.371990e-03  
## WhiteRice 1.365478e-02 -4.361552e-03 3.101105e-02  
## Tomato1KG 4.744235e-03 -3.723069e-03 2.528439e-02  
## Banana1KG -1.930782e-04 4.067051e-03 2.145038e-03  
## Onion1KG 1.157990e-02 -1.068742e-02 1.082134e-02  
## BeefRound1KG 8.165371e-02 2.039132e-02 -7.992917e-02  
## ToyotaCorolla 2.423911e-04 3.319915e-05 5.062688e-04  
## PreschoolperMonth -1.001822e-03 -7.257556e-03 7.218732e-04  
## PC19 PC20 PC21  
## GDP.USD..In\_Millions. 3.012118e-08 -2.885734e-07 3.627812e-07  
## MealInexpensive -1.409428e-02 6.843946e-02 -2.305261e-02  
## MealFor2 -3.125212e-01 2.297969e-01 -2.126485e-01  
## McMealMcDonalds -4.187665e-02 3.085213e-02 -1.771148e-02  
## DomesticBeer -2.738987e-02 3.603096e-02 -3.967579e-02  
## ImportedBeer -1.796678e-02 2.588046e-02 -4.637818e-02  
## CokeOrPepsi -9.317302e-03 -1.654678e-03 1.211524e-02  
## Water1Litre -7.115893e-03 -4.071751e-05 3.001581e-03  
## Milk1Litre 3.908962e-03 -7.794971e-03 -1.094199e-02  
## LoafofBread 6.716793e-04 3.106086e-03 -8.606438e-03  
## Eggs 7.281126e-05 -2.428526e-03 -1.116500e-03  
## LocalCheese -2.971185e-02 6.153259e-03 -3.819785e-02  
## Water2Litre 9.465372e-03 9.879627e-04 -8.950380e-03  
## BottleofWine -2.581892e-02 -2.703526e-02 -2.492475e-01  
## Domestic1LitreBeer 1.566172e-02 1.024112e-02 -2.948775e-02  
## Imported1LitreBeer 1.997204e-02 1.972696e-02 -3.818368e-02  
## Cigarettes20Pack 6.127026e-02 -9.617161e-02 -6.371405e-02  
## OnewayTicket -7.244888e-03 2.371906e-03 6.400354e-03  
## ChickenBreasts -5.142341e-02 1.922517e-03 1.125639e-02  
## MonthlyPass 7.493034e-02 -3.937135e-02 7.825995e-02  
## Gasoline1Litre 5.155395e-03 7.052666e-04 3.335548e-03  
## VWGolf 1.426908e-05 5.300435e-04 -3.607369e-04  
## Apartment1BD 1.178312e-02 -1.312686e-02 1.672644e-03  
## Apartment1BDOOC -2.205497e-02 4.252207e-03 2.312138e-03  
## Apartment3BDICC -6.561486e-03 9.181438e-03 -4.862692e-03  
## Apartment3BDOOC 6.650587e-03 -1.649684e-03 3.346049e-03  
## BasicUtilities -7.145212e-02 3.574268e-02 -4.778504e-03  
## PrepaidMobile1MIn 7.394345e-04 -1.100076e-04 5.111668e-04  
## Internet 2.650283e-01 -1.730375e-02 -2.054491e-02  
## GymFees 1.760369e-02 -2.152288e-01 3.049762e-01  
## TennisCourtFeesPerHour -2.272561e-01 4.558933e-01 -2.374810e-01  
## CinemaPerPerson -3.938846e-02 4.538247e-02 -3.059155e-02  
## PairofJeans 6.209432e-01 4.796168e-03 -1.046573e-03  
## SummerDress 9.965846e-02 3.062859e-01 -5.294924e-01  
## NikeRunningShoes -3.756480e-01 -2.268315e-01 9.781053e-02  
## LeatherShoes 4.815715e-02 -1.410345e-01 8.331647e-02  
## AptPricePerSquareM -2.160015e-04 1.048898e-03 -1.116489e-04  
## AptPricePerSqMOOC 5.742363e-04 -1.528609e-03 -2.049288e-05  
## AvgMnthlyNetSalary 6.579106e-03 7.510322e-05 -1.557191e-03  
## MortgageInterest 1.627541e-01 7.063067e-01 5.649845e-01  
## TaxiStartingFare -1.315667e-02 1.082536e-02 2.561238e-02  
## Taxi1KM -1.961065e-02 1.022592e-02 1.125376e-02  
## Taxi1HRWaiting -4.267690e-01 5.397677e-02 3.226559e-01  
## Apples1KG -3.214641e-03 1.504284e-03 -1.904923e-02  
## Oranges1KG 4.253133e-03 -1.596588e-04 -1.058496e-02  
## Potato1KG 6.755663e-03 -4.531018e-03 -4.055562e-03  
## Lettuce1Head 2.361865e-03 6.261451e-03 -5.391057e-03  
## CappucinoReg -2.323679e-03 1.838210e-02 -2.987805e-02  
## WhiteRice -5.570816e-03 -8.631868e-04 5.792021e-03  
## Tomato1KG -5.940737e-04 7.120819e-03 -1.203573e-03  
## Banana1KG 4.814610e-03 6.618630e-03 1.584545e-02  
## Onion1KG 2.145255e-03 -6.400604e-04 -6.166843e-04  
## BeefRound1KG -8.313742e-02 4.098714e-02 -4.254010e-04  
## ToyotaCorolla -3.823611e-05 -5.216800e-04 3.575324e-04  
## PreschoolperMonth -8.555867e-04 -6.533236e-04 -1.591024e-03  
## PC22 PC23 PC24  
## GDP.USD..In\_Millions. -1.154229e-07 3.466880e-08 -1.015312e-07  
## MealInexpensive -1.156913e-01 8.137446e-02 2.121590e-06  
## MealFor2 -5.406852e-01 4.245140e-01 1.524091e-01  
## McMealMcDonalds -6.403798e-02 -2.513680e-02 3.271052e-02  
## DomesticBeer -6.401649e-02 -2.331928e-02 5.079815e-02  
## ImportedBeer -4.740762e-02 -3.276221e-02 9.206054e-02  
## CokeOrPepsi -6.161111e-03 -1.645459e-04 1.244737e-02  
## Water1Litre -8.584600e-03 1.099701e-03 4.515757e-03  
## Milk1Litre -3.299370e-03 -7.971479e-03 2.908440e-02  
## LoafofBread 6.639633e-03 -1.826707e-02 3.357451e-02  
## Eggs -1.050584e-02 -1.850903e-02 3.909477e-02  
## LocalCheese 6.373899e-02 -1.348374e-01 2.566259e-01  
## Water2Litre -1.162823e-02 -8.811626e-03 2.315766e-02  
## BottleofWine -6.337434e-02 -3.975405e-01 6.600924e-01  
## Domestic1LitreBeer -2.039578e-02 -5.431190e-02 3.604851e-02  
## Imported1LitreBeer -1.723173e-02 -6.896045e-02 3.853276e-02  
## Cigarettes20Pack -1.845354e-01 -1.656619e-01 2.557897e-01  
## OnewayTicket 2.762059e-03 1.023078e-02 1.173492e-02  
## ChickenBreasts 1.888169e-02 -1.092844e-01 7.054063e-02  
## MonthlyPass 9.771329e-03 -6.584057e-03 -3.188364e-03  
## Gasoline1Litre 1.859772e-03 -5.489344e-03 3.336614e-04  
## VWGolf -2.435145e-04 -6.229244e-05 -2.463225e-04  
## Apartment1BD 5.363833e-03 -2.879579e-02 1.250507e-02  
## Apartment1BDOOC 1.265814e-02 1.243906e-02 -6.835628e-03  
## Apartment3BDICC -1.462675e-03 9.911223e-03 -4.896504e-03  
## Apartment3BDOOC -6.382822e-03 -8.398196e-03 1.364130e-03  
## BasicUtilities -1.201711e-02 -2.837861e-02 5.495492e-03  
## PrepaidMobile1MIn 1.121096e-03 -3.545126e-03 -3.714125e-04  
## Internet 1.641290e-01 -2.225158e-02 -1.004203e-01  
## GymFees -4.835227e-02 -1.284679e-02 -3.176049e-02  
## TennisCourtFeesPerHour 6.770437e-01 1.892449e-01 6.480828e-02  
## CinemaPerPerson -7.352803e-04 -4.875581e-02 -5.704816e-03  
## PairofJeans 7.009365e-02 4.451664e-02 5.909520e-02  
## SummerDress -2.252424e-01 -3.654184e-01 -4.594881e-01  
## NikeRunningShoes 1.299127e-01 1.629748e-01 7.863158e-02  
## LeatherShoes -2.031676e-02 -3.625649e-02 -5.274657e-03  
## AptPricePerSquareM -3.881954e-04 1.101967e-04 -5.623725e-04  
## AptPricePerSqMOOC 8.302081e-04 5.939105e-04 3.547499e-04  
## AvgMnthlyNetSalary 3.238513e-03 5.542792e-03 1.164136e-03  
## MortgageInterest -1.537047e-01 -3.713233e-02 1.820504e-01  
## TaxiStartingFare -2.115595e-02 -1.744833e-03 -4.342579e-02  
## Taxi1KM 1.452304e-02 -2.062706e-02 -3.756202e-02  
## Taxi1HRWaiting -4.374057e-02 -5.232174e-01 -2.899986e-01  
## Apples1KG 4.962801e-02 -6.857624e-02 2.705636e-02  
## Oranges1KG 2.189858e-02 -5.489263e-02 5.291466e-02  
## Potato1KG 2.285807e-02 -3.912368e-02 1.061081e-02  
## Lettuce1Head -2.651197e-03 -2.287451e-02 3.934631e-02  
## CappucinoReg -2.106329e-03 -1.454716e-02 5.704238e-02  
## WhiteRice 1.429508e-02 -2.635200e-02 1.424093e-03  
## Tomato1KG 4.270259e-02 -4.750623e-02 4.531560e-02  
## Banana1KG 1.909768e-02 -3.023430e-02 1.589513e-02  
## Onion1KG 2.287405e-02 -4.507222e-02 2.405050e-02  
## BeefRound1KG 2.156657e-01 -3.015335e-01 1.312040e-01  
## ToyotaCorolla 2.223084e-04 2.001344e-04 6.591761e-05  
## PreschoolperMonth -4.002207e-03 1.877450e-03 -3.492562e-03  
## PC25 PC26 PC27  
## GDP.USD..In\_Millions. 1.116077e-07 -7.149401e-08 -1.790634e-07  
## MealInexpensive 1.197612e-01 -2.106433e-01 -3.936373e-01  
## MealFor2 1.328584e-01 1.028040e-01 3.149380e-02  
## McMealMcDonalds 4.230789e-02 -1.719710e-01 3.061262e-02  
## DomesticBeer -3.527681e-02 -6.087999e-02 -1.913076e-01  
## ImportedBeer -2.977971e-02 -9.597072e-02 -1.996685e-01  
## CokeOrPepsi 8.064411e-03 -4.596041e-02 -3.014937e-02  
## Water1Litre 2.235960e-03 -2.611981e-02 -2.483525e-03  
## Milk1Litre 1.442345e-02 -1.081469e-02 1.362366e-02  
## LoafofBread 4.206660e-03 -3.374892e-02 -2.319966e-02  
## Eggs 5.467323e-02 -4.232945e-02 -7.377677e-02  
## LocalCheese 4.308453e-01 -3.425611e-01 6.751456e-01  
## Water2Litre 1.171247e-02 -3.100039e-02 -1.465321e-02  
## BottleofWine -3.227731e-01 4.090279e-01 3.971666e-02  
## Domestic1LitreBeer -5.246498e-02 -4.119006e-02 -9.726480e-02  
## Imported1LitreBeer -5.908777e-02 -6.192841e-02 -7.591985e-02  
## Cigarettes20Pack -2.081191e-01 -7.255690e-01 -1.954261e-01  
## OnewayTicket -1.486991e-02 -2.883649e-03 6.802593e-02  
## ChickenBreasts 2.728215e-01 5.388278e-02 4.368950e-02  
## MonthlyPass 9.873301e-02 5.989026e-02 1.674466e-02  
## Gasoline1Litre 5.664896e-03 -2.376590e-02 -2.559661e-02  
## VWGolf -9.942610e-05 -1.033133e-04 -5.826445e-05  
## Apartment1BD 4.806545e-03 1.049435e-02 -8.809994e-03  
## Apartment1BDOOC 1.195304e-02 -6.996908e-03 1.199120e-02  
## Apartment3BDICC 2.699167e-03 -4.030452e-03 3.166762e-03  
## Apartment3BDOOC -1.088142e-02 1.744377e-03 -5.709524e-03  
## BasicUtilities -1.048333e-02 5.149275e-03 -1.420620e-03  
## PrepaidMobile1MIn 4.610838e-04 -8.734975e-03 -9.271736e-03  
## Internet -7.866939e-02 5.081198e-04 -3.723768e-03  
## GymFees 1.561174e-03 7.431548e-03 2.262299e-02  
## TennisCourtFeesPerHour -2.092234e-01 -1.507443e-01 -1.419163e-02  
## CinemaPerPerson -2.874529e-02 -1.051990e-01 6.653220e-02  
## PairofJeans -1.105348e-02 4.763084e-02 4.290820e-02  
## SummerDress 5.324570e-02 7.855606e-03 7.293066e-02  
## NikeRunningShoes -1.556138e-02 1.017911e-02 2.469752e-03  
## LeatherShoes -5.309514e-02 -3.069906e-02 -4.617225e-02  
## AptPricePerSquareM -1.064171e-03 -2.843004e-04 2.270879e-04  
## AptPricePerSqMOOC 1.045872e-03 5.552947e-04 -7.158040e-04  
## AvgMnthlyNetSalary -1.806611e-03 6.694314e-04 2.335338e-03  
## MortgageInterest -1.449545e-02 1.984897e-02 9.316394e-03  
## TaxiStartingFare 1.798299e-02 7.440852e-04 -1.302428e-02  
## Taxi1KM 1.793263e-02 2.217883e-02 2.773822e-02  
## Taxi1HRWaiting -2.239372e-01 -2.103471e-02 8.020690e-02  
## Apples1KG 6.452373e-02 -6.238922e-02 5.176282e-03  
## Oranges1KG 5.822592e-02 -3.296571e-02 -1.522735e-02  
## Potato1KG 1.861713e-02 -3.617733e-02 -3.510142e-02  
## Lettuce1Head 9.607710e-03 -4.437740e-02 -1.415615e-02  
## CappucinoReg -1.411071e-02 2.482527e-02 -2.869911e-02  
## WhiteRice 3.578963e-02 -5.718365e-03 -6.465469e-02  
## Tomato1KG 3.634836e-02 -6.141264e-02 -3.618091e-02  
## Banana1KG 2.116940e-02 -3.226614e-02 -8.981265e-02  
## Onion1KG 1.864668e-02 -1.494705e-02 -3.606637e-02  
## BeefRound1KG 6.457705e-01 1.388992e-01 -4.488112e-01  
## ToyotaCorolla 7.642256e-05 5.522727e-05 -1.198609e-05  
## PreschoolperMonth -5.650572e-03 6.273910e-04 -1.044015e-04  
## PC28 PC29 PC30  
## GDP.USD..In\_Millions. 5.290712e-08 3.995908e-08 1.368076e-07  
## MealInexpensive -7.113312e-01 1.273034e-01 -3.348258e-01  
## MealFor2 2.190726e-01 4.346550e-02 6.565314e-03  
## McMealMcDonalds -9.722448e-02 -1.740380e-01 2.831919e-02  
## DomesticBeer -1.881465e-01 -1.054313e-01 1.285776e-01  
## ImportedBeer -1.605408e-01 -5.636234e-02 8.797895e-02  
## CokeOrPepsi -1.422225e-02 -1.523926e-03 6.131468e-02  
## Water1Litre -9.887139e-03 -1.315020e-02 2.014215e-02  
## Milk1Litre -1.751301e-02 -5.862135e-02 -2.617299e-02  
## LoafofBread 3.733378e-02 -2.488101e-02 9.992232e-03  
## Eggs -1.014353e-02 -9.119643e-02 7.017560e-02  
## LocalCheese -1.893888e-01 1.540408e-01 -1.288356e-01  
## Water2Litre 1.690556e-03 -2.611306e-02 -1.329380e-02  
## BottleofWine -1.296608e-01 3.821613e-02 -8.284890e-02  
## Domestic1LitreBeer -8.576290e-03 -4.485381e-02 6.623452e-03  
## Imported1LitreBeer -2.166693e-02 -6.794948e-02 -3.467827e-02  
## Cigarettes20Pack 3.142086e-01 9.492000e-02 2.146620e-01  
## OnewayTicket -1.289659e-02 -1.256892e-02 -1.041214e-02  
## ChickenBreasts -2.520011e-01 -3.406660e-01 6.664515e-01  
## MonthlyPass -2.242850e-02 1.427396e-02 5.977131e-04  
## Gasoline1Litre 6.701911e-03 -6.999994e-02 3.933641e-02  
## VWGolf 1.025574e-05 -2.436879e-05 7.834181e-05  
## Apartment1BD -1.564169e-03 -9.238092e-04 -9.568208e-03  
## Apartment1BDOOC -1.775638e-03 4.063906e-03 1.043555e-02  
## Apartment3BDICC -5.884003e-05 -2.990068e-04 3.822966e-03  
## Apartment3BDOOC 3.082131e-03 -1.282208e-03 -4.549362e-03  
## BasicUtilities -3.190105e-03 4.789685e-03 2.926042e-03  
## PrepaidMobile1MIn -2.827413e-03 -6.656766e-03 -1.019322e-02  
## Internet 2.551763e-03 2.876048e-02 1.945524e-02  
## GymFees -2.027051e-02 1.942792e-02 -1.395417e-02  
## TennisCourtFeesPerHour -4.729723e-03 4.720210e-02 7.937508e-02  
## CinemaPerPerson 6.161885e-02 -8.327435e-01 -3.051798e-01  
## PairofJeans 5.043045e-03 -7.419038e-03 -4.858032e-03  
## SummerDress -5.624570e-03 5.827067e-02 1.513948e-02  
## NikeRunningShoes -2.109756e-02 1.260299e-03 -3.098078e-02  
## LeatherShoes 3.782351e-03 -3.880240e-03 3.051993e-02  
## AptPricePerSquareM -1.359546e-04 7.183819e-05 3.590418e-04  
## AptPricePerSqMOOC 1.122342e-05 1.133989e-04 -4.584227e-04  
## AvgMnthlyNetSalary -4.796818e-04 3.467981e-04 -4.193470e-04  
## MortgageInterest 3.006369e-02 2.798464e-03 7.312947e-03  
## TaxiStartingFare 3.719287e-02 -4.613182e-02 -8.379827e-02  
## Taxi1KM 9.139501e-02 -6.449758e-02 -4.352663e-02  
## Taxi1HRWaiting -4.282264e-02 9.113054e-02 -1.386805e-02  
## Apples1KG 1.174584e-01 -4.101171e-02 -2.958779e-01  
## Oranges1KG 8.412162e-02 6.378030e-03 -1.843148e-01  
## Potato1KG 9.576863e-02 -2.609873e-03 -1.396207e-01  
## Lettuce1Head 1.711493e-02 1.044258e-02 -3.097784e-02  
## CappucinoReg -4.011328e-02 -1.432966e-01 -3.155595e-02  
## WhiteRice 4.689480e-02 -1.307103e-01 -1.197496e-01  
## Tomato1KG 1.124517e-01 -2.291765e-02 -2.337638e-01  
## Banana1KG 6.078861e-02 -4.719795e-03 -9.590862e-02  
## Onion1KG 4.775065e-02 -2.166475e-02 -5.427992e-02  
## BeefRound1KG 2.951059e-01 8.015284e-02 -1.899241e-02  
## ToyotaCorolla 6.494857e-05 7.439602e-06 -3.938839e-05  
## PreschoolperMonth 5.341073e-04 -1.715438e-03 7.004743e-04  
## PC31 PC32 PC33  
## GDP.USD..In\_Millions. -8.802135e-08 -8.390487e-09 -4.750030e-09  
## MealInexpensive -2.487359e-01 4.976776e-03 -1.119632e-01  
## MealFor2 -1.335032e-02 -6.813999e-02 5.527873e-03  
## McMealMcDonalds -1.207154e-01 6.589859e-01 5.563754e-02  
## DomesticBeer 5.106155e-01 -1.459852e-01 1.779772e-01  
## ImportedBeer 3.784193e-01 -8.798847e-02 2.201554e-01  
## CokeOrPepsi -2.439844e-02 2.188262e-03 -6.961047e-02  
## Water1Litre -5.330025e-02 1.365166e-03 -7.769341e-02  
## Milk1Litre -4.032643e-02 4.608975e-03 -9.639947e-03  
## LoafofBread -1.205714e-01 4.518989e-02 4.357619e-02  
## Eggs -8.114231e-03 9.251269e-02 -1.219566e-01  
## LocalCheese 2.124938e-01 -5.285493e-02 -3.027651e-02  
## Water2Litre -8.184058e-02 -4.302604e-02 8.727413e-02  
## BottleofWine -9.528655e-02 7.978379e-02 -3.666600e-02  
## Domestic1LitreBeer 2.812960e-01 -7.084431e-02 -5.158529e-03  
## Imported1LitreBeer 2.943201e-01 -7.946604e-02 1.471529e-02  
## Cigarettes20Pack -1.345898e-01 -3.984973e-03 -7.006304e-02  
## OnewayTicket 7.982793e-02 3.553406e-02 -1.371711e-01  
## ChickenBreasts -3.252583e-01 -1.746875e-01 2.407242e-01  
## MonthlyPass 7.879358e-04 7.109527e-03 -5.540209e-03  
## Gasoline1Litre 3.313399e-02 3.304308e-02 -9.849376e-02  
## VWGolf -9.063410e-05 4.449005e-06 7.964626e-05  
## Apartment1BD 4.646851e-03 1.362871e-03 -2.159914e-03  
## Apartment1BDOOC -3.898275e-03 4.004108e-03 -8.194334e-04  
## Apartment3BDICC -2.096935e-03 3.082837e-04 1.638603e-04  
## Apartment3BDOOC 2.376830e-03 -3.341286e-03 1.104473e-03  
## BasicUtilities 2.741131e-03 -2.336402e-03 1.405262e-03  
## PrepaidMobile1MIn -6.233192e-03 1.926640e-02 -7.600697e-04  
## Internet 1.579202e-02 6.400123e-03 -1.757060e-02  
## GymFees -5.811575e-03 -1.472080e-02 -3.727986e-03  
## TennisCourtFeesPerHour -4.301107e-02 9.142236e-03 5.437411e-03  
## CinemaPerPerson 2.080466e-02 -5.608272e-02 -2.803215e-01  
## PairofJeans -6.266037e-03 -2.288646e-02 2.950512e-02  
## SummerDress -2.368016e-02 -9.917607e-03 -4.320119e-03  
## NikeRunningShoes 1.825823e-02 -5.550856e-03 1.836604e-02  
## LeatherShoes 1.780818e-02 2.471253e-02 -2.949137e-02  
## AptPricePerSquareM -2.850915e-05 -6.908582e-05 -1.260942e-04  
## AptPricePerSqMOOC -2.403056e-04 2.329550e-04 2.035709e-04  
## AvgMnthlyNetSalary 5.601804e-04 6.383424e-04 -7.315785e-05  
## MortgageInterest -4.930652e-03 1.230329e-03 -9.619976e-03  
## TaxiStartingFare 1.497478e-01 5.039722e-01 5.598270e-01  
## Taxi1KM 1.428778e-03 2.073967e-01 -1.295856e-02  
## Taxi1HRWaiting -1.012349e-02 -5.648928e-02 -5.465611e-03  
## Apples1KG -1.269884e-01 -1.005851e-01 3.200508e-01  
## Oranges1KG -1.393161e-01 -1.469240e-01 2.085432e-01  
## Potato1KG -8.442647e-02 -4.051192e-02 1.438212e-01  
## Lettuce1Head -8.948164e-02 -7.919985e-02 7.874750e-02  
## CappucinoReg 9.261027e-02 3.997212e-02 7.376708e-02  
## WhiteRice -8.328539e-02 -2.236065e-01 2.106073e-01  
## Tomato1KG -1.449979e-01 -2.370251e-01 3.087617e-01  
## Banana1KG 5.420488e-02 -1.135987e-02 -6.235788e-02  
## Onion1KG -1.282791e-01 -5.188838e-02 1.437721e-01  
## BeefRound1KG 9.305589e-02 1.026514e-01 -1.941257e-01  
## ToyotaCorolla 1.530429e-05 -2.755857e-05 -8.368202e-05  
## PreschoolperMonth 2.876514e-04 -1.114585e-03 1.937883e-03  
## PC34 PC35 PC36  
## GDP.USD..In\_Millions. -4.456182e-08 -4.653251e-08 -1.712492e-08  
## MealInexpensive -1.567928e-01 -5.806973e-02 -5.434337e-02  
## MealFor2 2.278602e-03 -1.196263e-02 -2.786075e-02  
## McMealMcDonalds 5.876582e-01 -1.056786e-02 6.456203e-02  
## DomesticBeer 2.221430e-01 1.080927e-02 3.092482e-01  
## ImportedBeer 1.321235e-01 9.777724e-02 -1.751072e-03  
## CokeOrPepsi 8.768095e-02 -1.521826e-01 1.867428e-02  
## Water1Litre 9.235078e-02 -8.173139e-02 2.046125e-02  
## Milk1Litre -7.667639e-02 2.106861e-01 -9.729509e-02  
## LoafofBread 8.262158e-02 1.098995e-01 7.714429e-02  
## Eggs 1.570153e-02 3.011821e-01 -1.274016e-01  
## LocalCheese -4.052946e-02 2.534917e-02 -1.029158e-02  
## Water2Litre 2.714614e-02 1.083508e-01 -6.006211e-02  
## BottleofWine -3.169472e-02 -5.696540e-02 2.725657e-02  
## Domestic1LitreBeer 1.864602e-02 -1.789497e-01 -1.544311e-01  
## Imported1LitreBeer 3.814596e-02 -2.392362e-01 -6.019392e-01  
## Cigarettes20Pack -1.691702e-01 -1.263684e-03 3.324192e-02  
## OnewayTicket -7.040218e-03 -1.492576e-01 2.796295e-01  
## ChickenBreasts -7.827222e-02 -9.719957e-02 -1.019948e-01  
## MonthlyPass 5.857220e-03 6.281336e-03 -4.857700e-03  
## Gasoline1Litre 3.596992e-02 -4.007547e-02 -1.023654e-01  
## VWGolf -4.077383e-06 -3.219781e-06 -2.194060e-05  
## Apartment1BD 9.167769e-04 -1.370847e-03 1.990411e-03  
## Apartment1BDOOC -1.938724e-03 7.886773e-04 -3.221940e-03  
## Apartment3BDICC 2.958035e-04 3.811185e-04 -7.330580e-04  
## Apartment3BDOOC -1.219988e-06 2.359414e-04 1.295970e-03  
## BasicUtilities -2.040120e-03 -7.805689e-05 -1.240825e-03  
## PrepaidMobile1MIn -1.186157e-02 1.190828e-02 -2.886122e-02  
## Internet 4.743520e-03 1.836965e-03 2.714089e-02  
## GymFees -1.759368e-02 4.101456e-03 8.550208e-03  
## TennisCourtFeesPerHour -3.108064e-02 -4.874248e-03 -6.452148e-03  
## CinemaPerPerson -1.834016e-01 -9.844381e-02 1.310569e-01  
## PairofJeans 2.685315e-02 3.226245e-03 -4.805831e-03  
## SummerDress -1.836937e-02 2.055460e-02 3.055299e-02  
## NikeRunningShoes 2.700019e-03 -3.004073e-03 -1.033900e-02  
## LeatherShoes 1.712930e-03 -5.505952e-03 4.664640e-03  
## AptPricePerSquareM 1.204313e-04 3.184762e-05 -3.665342e-05  
## AptPricePerSqMOOC -1.648348e-04 -2.001083e-04 3.442437e-05  
## AvgMnthlyNetSalary 1.431513e-04 5.552773e-05 -2.715404e-04  
## MortgageInterest -4.454682e-03 -3.592501e-03 6.712385e-03  
## TaxiStartingFare -5.659592e-01 -1.470755e-01 8.335287e-02  
## Taxi1KM 4.633242e-02 -7.314547e-02 -5.611522e-01  
## Taxi1HRWaiting 9.329454e-03 4.967598e-02 -2.563692e-03  
## Apples1KG 2.598621e-01 -4.480283e-02 -3.275647e-02  
## Oranges1KG 8.646607e-02 6.053771e-02 -4.499524e-02  
## Potato1KG 1.089508e-01 6.737959e-02 -4.739379e-02  
## Lettuce1Head -6.492207e-02 4.806015e-02 -4.779075e-02  
## CappucinoReg -1.111463e-01 7.721442e-01 -1.092866e-01  
## WhiteRice 1.103178e-01 -9.921134e-03 -3.463814e-03  
## Tomato1KG 5.222334e-02 -6.718531e-02 6.283201e-02  
## Banana1KG 6.852803e-02 1.047218e-01 -2.365433e-02  
## Onion1KG 9.210787e-02 -8.168997e-02 3.667263e-02  
## BeefRound1KG -5.048222e-02 -2.503946e-02 7.693510e-02  
## ToyotaCorolla -3.392051e-05 3.081486e-06 2.584837e-05  
## PreschoolperMonth 1.042424e-03 4.395323e-04 5.759277e-04  
## PC37 PC38 PC39  
## GDP.USD..In\_Millions. -1.107719e-08 -5.830619e-08 -1.496926e-08  
## MealInexpensive 5.647119e-02 -2.713930e-02 -1.570646e-02  
## MealFor2 -7.324456e-03 -1.545516e-03 1.595743e-02  
## McMealMcDonalds -5.014747e-02 -8.585734e-02 2.634750e-01  
## DomesticBeer 1.626304e-01 -1.474792e-01 -2.028837e-01  
## ImportedBeer -7.475253e-02 2.338540e-01 -1.985160e-01  
## CokeOrPepsi -2.066243e-01 1.370614e-01 -2.049004e-01  
## Water1Litre -1.907144e-01 -2.945859e-02 -2.033916e-01  
## Milk1Litre 6.954560e-02 8.007048e-02 -8.733102e-02  
## LoafofBread -2.891370e-01 3.911634e-01 -2.103665e-01  
## Eggs -1.903909e-01 4.043991e-01 -9.820038e-02  
## LocalCheese 1.015871e-02 7.414825e-02 9.017385e-03  
## Water2Litre -3.491867e-02 1.331264e-01 -7.086324e-02  
## BottleofWine 4.084153e-02 3.120511e-02 -4.559447e-03  
## Domestic1LitreBeer -1.459469e-01 -4.578514e-02 3.191356e-01  
## Imported1LitreBeer -2.430171e-01 -5.577102e-02 1.747675e-01  
## Cigarettes20Pack 1.331283e-01 -7.092019e-02 -2.116993e-03  
## OnewayTicket 6.354814e-02 1.124960e-02 -2.001871e-01  
## ChickenBreasts 8.539191e-03 -9.548851e-02 2.716648e-02  
## MonthlyPass -6.656525e-03 1.910718e-03 2.674059e-03  
## Gasoline1Litre 1.275034e-02 2.134232e-01 -2.865656e-04  
## VWGolf 4.874578e-06 -1.285559e-05 -1.705083e-06  
## Apartment1BD 2.963275e-04 1.371278e-03 -7.057185e-04  
## Apartment1BDOOC 3.636913e-04 -2.494363e-03 7.735548e-04  
## Apartment3BDICC 3.228474e-04 -1.401984e-05 9.167295e-04  
## Apartment3BDOOC -6.498060e-04 2.538982e-04 -9.878450e-04  
## BasicUtilities 7.578233e-05 1.594324e-03 1.157555e-03  
## PrepaidMobile1MIn 9.221966e-03 6.758713e-02 7.172746e-03  
## Internet 1.245972e-03 -6.057278e-03 6.366594e-03  
## GymFees -2.924407e-03 -8.284513e-04 -1.108318e-02  
## TennisCourtFeesPerHour 1.788315e-02 8.289491e-04 1.271571e-02  
## CinemaPerPerson -3.248875e-02 -4.247365e-02 -4.266020e-02  
## PairofJeans 1.676182e-02 3.858547e-03 -6.309706e-03  
## SummerDress -5.566888e-03 2.525735e-02 -1.673294e-02  
## NikeRunningShoes -1.508514e-03 2.568794e-03 -2.368405e-03  
## LeatherShoes -1.859982e-03 -1.814809e-02 2.663097e-03  
## AptPricePerSquareM 8.357141e-06 1.324824e-05 -6.124727e-05  
## AptPricePerSqMOOC -1.088611e-05 -8.552987e-05 1.494794e-04  
## AvgMnthlyNetSalary 4.734191e-05 3.876671e-04 1.944443e-04  
## MortgageInterest 1.312303e-02 -4.516323e-03 -6.814351e-03  
## TaxiStartingFare -4.541453e-02 9.326927e-02 2.319440e-03  
## Taxi1KM 3.665158e-01 -1.753062e-02 -4.742988e-01  
## Taxi1HRWaiting -6.755378e-03 1.345381e-02 1.178326e-02  
## Apples1KG 2.095699e-01 -1.784248e-01 -2.629871e-01  
## Oranges1KG -2.043473e-01 -3.508917e-01 1.663505e-02  
## Potato1KG -3.240272e-04 9.008763e-02 2.887762e-02  
## Lettuce1Head -2.038522e-01 -2.647230e-02 -8.897993e-02  
## CappucinoReg -1.819915e-03 -2.719023e-01 6.852841e-02  
## WhiteRice 5.174855e-01 4.577042e-01 3.675428e-01  
## Tomato1KG -2.887995e-01 7.912600e-02 9.026244e-02  
## Banana1KG -8.266282e-02 1.044216e-01 1.485417e-01  
## Onion1KG -1.686259e-01 -9.747533e-05 -2.237348e-01  
## BeefRound1KG 3.100190e-02 -5.125782e-02 1.914658e-02  
## ToyotaCorolla -1.503255e-05 -3.808085e-06 4.649704e-06  
## PreschoolperMonth -5.405580e-04 4.873680e-04 -3.118965e-04  
## PC40 PC41 PC42  
## GDP.USD..In\_Millions. -3.153679e-08 -9.591241e-09 -3.586985e-08  
## MealInexpensive -1.067923e-02 4.300219e-03 -2.171459e-02  
## MealFor2 1.110152e-02 3.934886e-03 -3.792516e-03  
## McMealMcDonalds -2.572207e-02 -9.071693e-02 2.676153e-02  
## DomesticBeer -2.184932e-01 2.365727e-01 -1.260153e-01  
## ImportedBeer 1.640751e-01 -2.477540e-01 4.534825e-01  
## CokeOrPepsi -3.858312e-03 3.211381e-01 -3.394287e-01  
## Water1Litre -1.466791e-03 1.550054e-01 -3.315342e-01  
## Milk1Litre 6.223518e-02 -1.430080e-01 -4.839006e-02  
## LoafofBread 2.325806e-01 -1.200367e-01 -6.075031e-04  
## Eggs -1.755046e-01 1.240602e-01 5.244763e-03  
## LocalCheese -1.477789e-02 6.554600e-02 1.872740e-02  
## Water2Litre 4.183087e-02 -3.225937e-03 -9.374276e-02  
## BottleofWine -1.663130e-02 4.408035e-02 4.855457e-03  
## Domestic1LitreBeer -1.898117e-03 1.071544e-01 -1.318468e-01  
## Imported1LitreBeer 1.702082e-01 -2.251795e-01 -2.050947e-01  
## Cigarettes20Pack 3.466516e-03 -7.993308e-04 2.722264e-03  
## OnewayTicket -2.497655e-01 -6.381749e-01 -4.057059e-01  
## ChickenBreasts -9.427460e-03 -2.085550e-03 -4.490350e-02  
## MonthlyPass 4.217735e-03 4.163993e-03 4.984603e-03  
## Gasoline1Litre -1.898143e-01 -1.633681e-01 -1.289373e-01  
## VWGolf -5.527017e-06 -2.136488e-05 -1.867340e-05  
## Apartment1BD 1.297079e-03 -8.296277e-04 3.955452e-04  
## Apartment1BDOOC 6.992950e-04 1.676958e-03 -1.972782e-03  
## Apartment3BDICC -4.635884e-04 2.558160e-04 -4.906209e-04  
## Apartment3BDOOC -5.234265e-04 -9.126599e-04 1.171522e-03  
## BasicUtilities 5.547951e-03 -1.999481e-03 8.252706e-04  
## PrepaidMobile1MIn -6.490737e-03 1.010635e-02 7.445719e-02  
## Internet 1.178491e-03 2.470040e-03 1.289749e-02  
## GymFees -6.306337e-03 -6.097242e-04 -7.491646e-03  
## TennisCourtFeesPerHour -8.240390e-03 1.103758e-02 -3.061327e-03  
## CinemaPerPerson 6.865827e-02 5.525869e-02 1.413077e-01  
## PairofJeans -6.604165e-03 9.994919e-03 1.118696e-02  
## SummerDress -2.166649e-02 1.741131e-03 -8.116397e-03  
## NikeRunningShoes -4.123404e-03 5.927945e-03 -1.515263e-03  
## LeatherShoes 1.613385e-02 -7.800653e-03 4.333320e-03  
## AptPricePerSquareM 2.195927e-05 1.246010e-04 3.742223e-05  
## AptPricePerSqMOOC -6.414177e-05 -2.262974e-04 -6.774858e-05  
## AvgMnthlyNetSalary -9.224907e-05 4.421743e-04 3.804710e-04  
## MortgageInterest 1.497118e-02 -9.505132e-04 3.677656e-03  
## TaxiStartingFare -2.481834e-02 7.300375e-02 -9.589654e-02  
## Taxi1KM -3.501964e-01 6.433714e-02 1.044319e-01  
## Taxi1HRWaiting 8.156716e-03 -5.296762e-03 1.182205e-02  
## Apples1KG 4.826756e-01 4.482614e-02 -2.003046e-01  
## Oranges1KG -3.856337e-01 -1.393325e-01 2.465490e-01  
## Potato1KG 4.066823e-02 1.166574e-01 -5.400256e-02  
## Lettuce1Head -1.801272e-02 -1.361488e-01 -1.033225e-01  
## CappucinoReg 5.973043e-03 -6.899282e-02 -3.204647e-01  
## WhiteRice -1.007130e-01 -6.029684e-02 -1.679055e-01  
## Tomato1KG -3.309377e-01 -6.641663e-02 -3.680244e-03  
## Banana1KG -2.420912e-01 3.305668e-01 -6.950330e-02  
## Onion1KG -1.032235e-01 5.665858e-02 3.576773e-02  
## BeefRound1KG 6.358267e-02 -5.210136e-02 1.281102e-02  
## ToyotaCorolla 2.206243e-07 7.604116e-06 1.602357e-05  
## PreschoolperMonth 2.878070e-05 -5.775985e-04 3.219158e-05  
## PC43 PC44 PC45  
## GDP.USD..In\_Millions. -1.509227e-08 -3.464199e-08 -1.073059e-08  
## MealInexpensive -1.459415e-02 -5.845064e-03 -3.573418e-02  
## MealFor2 3.532621e-03 -1.978403e-02 -8.723829e-03  
## McMealMcDonalds -6.132839e-02 5.915382e-02 5.550032e-02  
## DomesticBeer -3.526610e-01 -1.257819e-01 1.166879e-01  
## ImportedBeer 4.047729e-01 2.038599e-01 -1.795864e-03  
## CokeOrPepsi 3.324461e-01 2.856523e-01 -2.788024e-02  
## Water1Litre 1.570426e-01 2.990512e-01 -2.040063e-02  
## Milk1Litre -1.141111e-01 -2.121249e-01 2.897457e-03  
## LoafofBread -2.094607e-01 7.342529e-03 -2.740495e-02  
## Eggs -1.065398e-01 -3.776194e-01 -3.551416e-01  
## LocalCheese -1.597616e-02 3.483057e-02 1.134615e-02  
## Water2Litre -7.002895e-02 -3.881413e-02 3.218046e-01  
## BottleofWine 1.002504e-02 -4.301646e-03 1.092410e-02  
## Domestic1LitreBeer 4.697357e-02 -8.396126e-03 -2.861428e-01  
## Imported1LitreBeer -1.820207e-01 -9.293292e-02 3.967220e-02  
## Cigarettes20Pack -7.947925e-03 1.015253e-02 -2.653547e-02  
## OnewayTicket 1.157270e-01 -1.667047e-01 -2.039991e-01  
## ChickenBreasts 7.049649e-02 -1.034558e-01 -5.274990e-02  
## MonthlyPass -4.932437e-03 6.568105e-03 4.738256e-03  
## Gasoline1Litre 2.933651e-01 -1.089476e-01 3.537739e-01  
## VWGolf 4.207067e-05 -1.232277e-05 -9.529525e-06  
## Apartment1BD -9.839985e-04 -7.558674e-04 -4.808965e-05  
## Apartment1BDOOC 1.626254e-03 -5.989709e-05 -7.995967e-04  
## Apartment3BDICC 1.996462e-04 3.515595e-04 -3.364393e-05  
## Apartment3BDOOC -3.359766e-04 2.724414e-04 5.564467e-04  
## BasicUtilities -1.635742e-03 -2.447138e-03 4.946550e-04  
## PrepaidMobile1MIn 1.834259e-02 -5.106515e-03 1.126646e-03  
## Internet 2.996449e-03 6.889348e-03 5.851548e-03  
## GymFees -4.160439e-03 2.898778e-03 -1.545383e-03  
## TennisCourtFeesPerHour -5.873915e-04 -1.612801e-02 -3.814958e-03  
## CinemaPerPerson -7.164882e-03 3.892450e-02 3.709053e-02  
## PairofJeans -3.506027e-03 1.974006e-03 -9.799608e-04  
## SummerDress 1.609569e-02 5.359157e-03 -4.813026e-04  
## NikeRunningShoes -6.296368e-03 -6.846164e-04 4.989136e-03  
## LeatherShoes 1.362646e-03 6.360777e-04 -4.600450e-03  
## AptPricePerSquareM 1.266504e-05 2.618882e-05 -1.885841e-05  
## AptPricePerSqMOOC -7.350857e-06 -6.471253e-05 -7.837826e-06  
## AvgMnthlyNetSalary -2.998323e-04 -9.559634e-05 2.149273e-04  
## MortgageInterest 4.044033e-04 1.924333e-03 -7.612926e-03  
## TaxiStartingFare 6.528883e-02 -5.861565e-02 1.202904e-02  
## Taxi1KM -6.367982e-02 1.706824e-01 -4.788951e-02  
## Taxi1HRWaiting 9.162986e-04 -9.029614e-03 -1.200372e-03  
## Apples1KG 1.896532e-01 -3.437630e-01 -9.728140e-02  
## Oranges1KG 2.705761e-01 -1.333525e-01 -1.785492e-02  
## Potato1KG -2.337859e-02 6.271857e-03 -8.920631e-02  
## Lettuce1Head -1.909401e-01 5.496914e-02 6.109348e-01  
## CappucinoReg 7.010535e-02 2.700270e-01 -8.087055e-02  
## WhiteRice -2.563666e-03 2.083380e-01 2.422598e-02  
## Tomato1KG -1.714155e-01 2.171524e-01 -1.738638e-01  
## Banana1KG 3.205269e-01 -4.181145e-01 2.464491e-01  
## Onion1KG -2.545495e-01 1.869330e-02 -5.127138e-02  
## BeefRound1KG -4.677414e-02 7.650602e-02 2.555257e-02  
## ToyotaCorolla -5.242410e-05 1.364438e-05 -1.996371e-06  
## PreschoolperMonth 7.622796e-04 8.452679e-05 4.065001e-04  
## PC46 PC47 PC48  
## GDP.USD..In\_Millions. -2.681707e-08 -8.916671e-09 -9.555753e-09  
## MealInexpensive -1.739265e-02 4.286027e-03 -9.255719e-03  
## MealFor2 -4.535165e-03 -1.046266e-02 -1.413109e-02  
## McMealMcDonalds -3.332234e-02 -1.770894e-02 6.717877e-03  
## DomesticBeer 1.046065e-01 -3.516633e-02 8.284099e-02  
## ImportedBeer -1.270655e-01 -3.492740e-02 -4.515561e-02  
## CokeOrPepsi 1.382042e-01 -1.452900e-01 1.627186e-01  
## Water1Litre 1.490557e-01 5.363237e-02 1.456544e-02  
## Milk1Litre 7.830630e-02 -5.769199e-01 -6.221993e-02  
## LoafofBread 2.514904e-02 -1.309050e-02 3.176549e-01  
## Eggs 1.667164e-01 3.115366e-01 6.585770e-03  
## LocalCheese 2.102416e-02 8.934115e-04 -1.623622e-02  
## Water2Litre -8.473527e-02 4.144704e-01 -2.665653e-01  
## BottleofWine -3.163443e-03 6.226531e-03 5.968739e-03  
## Domestic1LitreBeer -1.110090e-01 1.778704e-01 -2.801188e-01  
## Imported1LitreBeer 1.305670e-01 -9.738546e-02 1.921747e-01  
## Cigarettes20Pack 1.370405e-04 1.568997e-04 8.362267e-03  
## OnewayTicket -1.616123e-01 7.474624e-04 5.907528e-02  
## ChickenBreasts -1.133927e-01 -4.066854e-02 2.328265e-02  
## MonthlyPass 1.926669e-03 -2.200363e-03 -3.138408e-03  
## Gasoline1Litre 1.843382e-01 -5.047801e-02 -5.029359e-01  
## VWGolf -9.094084e-06 1.200890e-05 1.314545e-05  
## Apartment1BD -1.495084e-04 -8.084447e-04 -6.050707e-04  
## Apartment1BDOOC 1.654715e-03 1.143112e-04 1.350627e-03  
## Apartment3BDICC -2.523150e-05 3.274932e-04 4.804768e-04  
## Apartment3BDOOC -6.218463e-04 -1.505414e-05 -8.148773e-04  
## BasicUtilities -1.061037e-03 1.023640e-04 3.982196e-04  
## PrepaidMobile1MIn 5.290663e-02 -4.198532e-02 1.858907e-02  
## Internet -1.706128e-03 4.149578e-03 8.835026e-03  
## GymFees 1.886174e-03 1.461854e-03 -3.042448e-03  
## TennisCourtFeesPerHour 1.656070e-02 3.600988e-03 -2.179811e-03  
## CinemaPerPerson 1.137386e-03 6.774163e-03 1.255384e-02  
## PairofJeans 1.687940e-03 -1.251149e-03 1.797974e-03  
## SummerDress -1.249116e-03 -4.365883e-03 4.306436e-03  
## NikeRunningShoes 7.877224e-03 1.323639e-03 -1.457492e-03  
## LeatherShoes -5.680954e-03 4.598555e-03 -7.234480e-04  
## AptPricePerSquareM -3.146212e-05 -5.658647e-06 -5.228444e-05  
## AptPricePerSqMOOC 3.819840e-05 6.682051e-05 1.277385e-04  
## AvgMnthlyNetSalary 2.091843e-04 -4.400256e-05 -1.680320e-04  
## MortgageInterest 6.463463e-03 -2.535441e-03 -3.827814e-03  
## TaxiStartingFare 8.393199e-02 7.636775e-03 2.421745e-02  
## Taxi1KM -1.997528e-01 4.473849e-02 7.836905e-02  
## Taxi1HRWaiting 8.639553e-03 5.841425e-03 -9.044272e-03  
## Apples1KG -7.213430e-02 1.820965e-01 -4.476913e-02  
## Oranges1KG 4.843566e-01 6.277209e-02 2.319796e-01  
## Potato1KG -6.267265e-02 -4.704038e-01 -1.613619e-01  
## Lettuce1Head -9.142555e-02 1.012640e-01 1.456269e-01  
## CappucinoReg -3.760323e-02 2.029606e-02 -5.531347e-02  
## WhiteRice 2.598289e-01 6.467443e-02 1.792024e-01  
## Tomato1KG -4.562570e-01 -1.163567e-02 -6.494955e-02  
## Banana1KG -3.803116e-01 -1.675274e-01 2.031688e-01  
## Onion1KG 2.477943e-01 -1.430553e-01 -4.735520e-01  
## BeefRound1KG 1.288770e-02 4.382930e-03 -4.132416e-03  
## ToyotaCorolla -6.864024e-06 -4.400666e-06 -3.064126e-06  
## PreschoolperMonth -1.614083e-04 2.773590e-04 1.613192e-04  
## PC49 PC50 PC51  
## GDP.USD..In\_Millions. -1.080601e-08 -1.125356e-08 -1.841066e-08  
## MealInexpensive 3.026098e-02 -6.159181e-02 1.310586e-02  
## MealFor2 1.404147e-02 -1.664813e-03 7.635827e-03  
## McMealMcDonalds -3.969279e-02 8.487680e-02 -2.765707e-03  
## DomesticBeer -9.962184e-02 -1.264070e-01 1.271277e-02  
## ImportedBeer 3.033951e-02 1.729726e-01 -8.245022e-02  
## CokeOrPepsi -5.527515e-02 7.568607e-02 -2.321673e-03  
## Water1Litre -2.085124e-01 1.581166e-01 -3.708039e-02  
## Milk1Litre -4.883231e-01 2.938676e-01 2.001052e-01  
## LoafofBread 1.165977e-01 -5.359391e-01 3.397997e-01  
## Eggs -8.452142e-03 2.453813e-01 -2.969630e-01  
## LocalCheese 3.058842e-02 -2.099840e-02 1.365740e-02  
## Water2Litre -4.618625e-01 -1.427633e-01 -2.188796e-02  
## BottleofWine -9.851739e-03 -2.074669e-03 -1.090005e-02  
## Domestic1LitreBeer 2.299114e-02 -1.564556e-01 4.019852e-02  
## Imported1LitreBeer 1.767539e-02 5.030768e-02 2.263497e-02  
## Cigarettes20Pack 5.686796e-03 -9.218079e-03 2.446755e-02  
## OnewayTicket 1.045533e-01 -3.217584e-03 -1.187325e-01  
## ChickenBreasts 3.866983e-02 -5.046980e-02 -8.703717e-03  
## MonthlyPass 2.341678e-03 -3.354542e-04 3.539662e-04  
## Gasoline1Litre 7.494100e-03 -2.666565e-01 1.447023e-01  
## VWGolf 7.386286e-08 6.910017e-06 1.202768e-05  
## Apartment1BD 1.008364e-04 6.410839e-04 -1.687116e-03  
## Apartment1BDOOC 6.255461e-05 -1.306628e-03 9.361792e-04  
## Apartment3BDICC -1.894048e-04 -1.754813e-04 6.212653e-04  
## Apartment3BDOOC 3.108335e-06 8.351075e-04 -1.761873e-04  
## BasicUtilities -7.587057e-04 -9.487780e-04 -2.498109e-04  
## PrepaidMobile1MIn 7.994820e-02 6.787391e-02 5.399973e-02  
## Internet -1.124925e-02 1.034530e-02 1.192651e-03  
## GymFees 9.630520e-04 -1.023236e-02 7.748415e-04  
## TennisCourtFeesPerHour -8.794051e-03 6.577251e-04 -6.032321e-03  
## CinemaPerPerson -3.891892e-03 -1.848578e-02 -3.214441e-02  
## PairofJeans 8.062920e-05 8.964468e-04 3.438116e-04  
## SummerDress 2.161617e-03 7.739367e-03 1.093423e-03  
## NikeRunningShoes 2.165258e-03 -6.504415e-03 -1.062612e-03  
## LeatherShoes 1.887668e-04 3.098489e-03 -2.352974e-03  
## AptPricePerSquareM 1.193539e-05 1.395585e-05 -6.128330e-05  
## AptPricePerSqMOOC -2.699376e-06 -2.656955e-05 5.383999e-05  
## AvgMnthlyNetSalary -2.910863e-05 1.423132e-04 1.285151e-04  
## MortgageInterest -5.314662e-03 -6.074287e-04 -3.277458e-03  
## TaxiStartingFare -1.660819e-02 4.519213e-04 -5.446496e-03  
## Taxi1KM 3.081672e-02 -1.143748e-01 4.198751e-02  
## Taxi1HRWaiting -1.204926e-02 3.687318e-03 3.088471e-03  
## Apples1KG 4.572656e-02 8.350135e-02 4.577337e-02  
## Oranges1KG -1.274435e-01 -1.733202e-01 -1.592530e-02  
## Potato1KG 3.175815e-02 -3.937556e-01 -6.707512e-01  
## Lettuce1Head 2.307708e-01 2.441018e-01 -3.537880e-01  
## CappucinoReg 1.840266e-01 -6.122937e-02 1.115570e-01  
## WhiteRice 9.580071e-02 1.166263e-01 3.443598e-02  
## Tomato1KG -2.229613e-01 1.065248e-01 1.424336e-01  
## Banana1KG 2.099387e-01 5.583355e-02 2.091002e-01  
## Onion1KG 4.909560e-01 2.347447e-01 2.194845e-01  
## BeefRound1KG -4.014952e-02 7.206714e-03 7.535716e-03  
## ToyotaCorolla -4.566364e-06 -8.102482e-06 -9.866569e-06  
## PreschoolperMonth -1.105426e-04 1.284306e-04 3.024930e-05  
## PC52 PC53 PC54  
## GDP.USD..In\_Millions. -4.366536e-09 -2.134086e-08 -1.384739e-08  
## MealInexpensive -5.495005e-03 -4.737727e-03 5.865997e-03  
## MealFor2 6.823884e-04 3.505852e-04 1.236839e-03  
## McMealMcDonalds -3.326901e-03 2.569287e-03 -4.134116e-02  
## DomesticBeer -1.142273e-01 3.116507e-02 2.141611e-02  
## ImportedBeer 9.899657e-02 -3.264483e-02 3.877342e-02  
## CokeOrPepsi -8.226712e-02 3.232118e-01 -4.634267e-01  
## Water1Litre 1.451067e-01 -4.129455e-01 5.356937e-01  
## Milk1Litre 3.714628e-02 -2.626551e-01 -2.235715e-01  
## LoafofBread 9.995246e-03 -1.940717e-01 -2.841141e-02  
## Eggs -1.743789e-01 2.401356e-02 4.375458e-02  
## LocalCheese 1.381963e-02 -7.097470e-03 1.088780e-02  
## Water2Litre 5.085978e-01 2.516156e-01 -1.167833e-01  
## BottleofWine -2.042942e-02 1.401407e-02 1.758012e-02  
## Domestic1LitreBeer 8.041711e-02 -5.098004e-01 -4.256661e-01  
## Imported1LitreBeer 5.200907e-02 2.904892e-01 2.100435e-01  
## Cigarettes20Pack -5.101186e-03 2.268610e-02 3.142471e-02  
## OnewayTicket 2.054667e-01 4.669439e-02 -7.220906e-02  
## ChickenBreasts 1.276538e-02 -9.358000e-03 2.406749e-02  
## MonthlyPass -4.169346e-03 -2.350142e-04 3.050165e-04  
## Gasoline1Litre -4.676502e-01 7.254985e-03 1.353273e-01  
## VWGolf -1.177761e-05 6.103748e-06 3.117774e-06  
## Apartment1BD -9.669743e-04 6.667165e-04 -1.075076e-04  
## Apartment1BDOOC 1.001782e-03 -5.905780e-04 2.346876e-04  
## Apartment3BDICC 1.615661e-04 -2.066196e-04 1.010812e-04  
## Apartment3BDOOC 1.488022e-04 -1.225155e-05 -4.183821e-04  
## BasicUtilities 2.200746e-03 -5.822488e-04 -6.749469e-04  
## PrepaidMobile1MIn -3.815206e-02 2.085911e-01 -2.400663e-01  
## Internet -1.121627e-02 3.331378e-03 4.882766e-03  
## GymFees -1.096029e-03 -5.847855e-04 -3.747539e-04  
## TennisCourtFeesPerHour 6.833664e-03 -4.747961e-03 -2.849449e-04  
## CinemaPerPerson 1.991496e-02 2.291744e-02 1.779329e-03  
## PairofJeans 7.821209e-04 -8.270197e-03 -4.555364e-03  
## SummerDress -2.716612e-03 4.347057e-03 -3.084412e-05  
## NikeRunningShoes 2.410847e-03 -3.564934e-03 -2.505206e-03  
## LeatherShoes -1.453181e-03 7.191726e-03 5.387154e-03  
## AptPricePerSquareM 5.761396e-05 2.286015e-05 3.554930e-05  
## AptPricePerSqMOOC -1.192403e-04 -2.013281e-05 -6.105048e-05  
## AvgMnthlyNetSalary -1.802477e-04 1.650038e-04 1.250856e-04  
## MortgageInterest -4.372695e-03 1.512033e-03 2.096674e-03  
## TaxiStartingFare 1.499010e-02 -1.072571e-02 4.807674e-02  
## Taxi1KM 2.051564e-02 -1.129085e-01 -7.294548e-02  
## Taxi1HRWaiting -3.264334e-03 -3.760661e-03 -4.622721e-03  
## Apples1KG -2.093771e-01 -2.456100e-02 -1.691083e-02  
## Oranges1KG 8.945287e-02 -7.710464e-02 -1.040986e-01  
## Potato1KG 1.224490e-01 3.071867e-02 7.086707e-02  
## Lettuce1Head -1.608609e-01 -3.180633e-01 -2.597304e-01  
## CappucinoReg -1.633252e-02 9.062130e-02 3.917000e-04  
## WhiteRice 1.044866e-01 -8.164608e-02 2.976765e-04  
## Tomato1KG -3.063600e-01 1.392836e-01 9.575517e-02  
## Banana1KG 2.764108e-01 -3.183101e-02 1.385217e-01  
## Onion1KG 3.330783e-01 5.955619e-02 -6.783325e-03  
## BeefRound1KG 2.771468e-03 2.112376e-02 -1.605828e-03  
## ToyotaCorolla 1.195622e-05 -2.395472e-06 -2.960850e-06  
## PreschoolperMonth 1.487805e-04 -1.855343e-04 -1.756788e-04  
## PC55  
## GDP.USD..In\_Millions. -1.431866e-08  
## MealInexpensive 7.069030e-03  
## MealFor2 -3.760571e-03  
## McMealMcDonalds 1.559079e-02  
## DomesticBeer -4.096952e-02  
## ImportedBeer 3.446400e-02  
## CokeOrPepsi 1.980618e-01  
## Water1Litre -2.701381e-01  
## Milk1Litre 2.433392e-02  
## LoafofBread -2.055522e-02  
## Eggs 3.682612e-02  
## LocalCheese 1.967196e-03  
## Water2Litre -1.105202e-02  
## BottleofWine 2.780552e-04  
## Domestic1LitreBeer -4.514530e-02  
## Imported1LitreBeer 1.675491e-02  
## Cigarettes20Pack 1.718138e-03  
## OnewayTicket -3.090961e-02  
## ChickenBreasts -2.525742e-02  
## MonthlyPass 1.687517e-03  
## Gasoline1Litre -6.826910e-03  
## VWGolf 3.947713e-06  
## Apartment1BD 2.154554e-04  
## Apartment1BDOOC -2.873760e-04  
## Apartment3BDICC -3.983804e-05  
## Apartment3BDOOC 8.343718e-05  
## BasicUtilities -2.518701e-04  
## PrepaidMobile1MIn -9.305682e-01  
## Internet 1.901942e-03  
## GymFees -1.624444e-03  
## TennisCourtFeesPerHour -1.120245e-04  
## CinemaPerPerson 1.334827e-02  
## PairofJeans -2.799330e-04  
## SummerDress 2.584232e-03  
## NikeRunningShoes -7.857150e-04  
## LeatherShoes 5.995530e-06  
## AptPricePerSquareM -1.701040e-05  
## AptPricePerSqMOOC 2.344511e-05  
## AvgMnthlyNetSalary 6.038399e-05  
## MortgageInterest -9.251801e-04  
## TaxiStartingFare 2.101223e-03  
## Taxi1KM 6.068533e-03  
## Taxi1HRWaiting 2.654168e-03  
## Apples1KG -1.967518e-02  
## Oranges1KG 1.153887e-02  
## Potato1KG -6.134780e-02  
## Lettuce1Head -2.340426e-03  
## CappucinoReg 5.101351e-03  
## WhiteRice 3.547978e-02  
## Tomato1KG -1.474757e-02  
## Banana1KG -1.051297e-02  
## Onion1KG 7.783825e-02  
## BeefRound1KG 1.630300e-03  
## ToyotaCorolla -5.868699e-06  
## PreschoolperMonth -1.705590e-05

#Transform the dataset using calculated PCAs.  
  
head(as.matrix(GDPdata.train.set)%\*%GDPdataTrainSet.pca.rawdata$rotation)

## PC1 PC2 PC3 PC4 PC5 PC6  
## 152 -1657600.6 22421.78 -2777.692 518.6467 270.9716 161.27668  
## 36 -913734.6 38558.84 -1786.204 -7127.4461 -1188.6694 330.28184  
## 149 -1042244.1 35997.22 -3787.270 -259.3350 437.1914 92.60741  
## 28 -913726.7 34369.38 -1151.802 -514.5228 -1747.6452 -134.02859  
## 98 -368338.2 25328.39 -2736.380 988.4128 -730.5912 -26.93799  
## 69 -585711.8 24385.65 -1379.107 1098.3752 -159.8019 177.18440  
## PC7 PC8 PC9 PC10 PC11 PC12  
## 152 42.02565 58.64510 3.820579 -5.357024 -42.225155 23.268322  
## 36 -77.89882 624.93353 147.305601 64.369019 -21.175575 -32.772853  
## 149 509.11289 -118.12303 260.119338 -120.399985 48.342437 -43.933408  
## 28 -333.07630 403.23286 -81.603761 -39.222289 -5.076527 -44.747988  
## 98 53.62413 -158.87292 -26.541862 -115.423528 10.936540 8.630231  
## 69 -57.44895 -71.64894 -64.652792 -9.677417 -72.771037 -20.325695  
## PC13 PC14 PC15 PC16 PC17 PC18  
## 152 -1.123459 -17.656709 3.078327 -7.007054 5.163803 -4.881263  
## 36 16.820178 17.365373 22.419855 8.161914 -6.832030 -1.161231  
## 149 -17.313957 -13.926783 1.770525 9.848926 -5.465547 9.312406  
## 28 -23.079367 -8.786819 14.054397 9.857995 -10.611005 -3.597320  
## 98 -20.960788 29.696626 -10.733929 2.731965 -9.869289 -1.066033  
## 69 6.206032 -8.643903 7.019475 -4.310475 1.289157 -6.814378  
## PC19 PC20 PC21 PC22 PC23 PC24  
## 152 2.4029854 3.2689183 -4.5756735 2.4671157 -0.8548864 -1.7394346  
## 36 2.6734561 -2.1503367 0.1985441 -2.8094576 3.7980786 -0.7830559  
## 149 -3.0530097 -0.6689939 -2.2691287 -1.0322038 -8.5656141 10.4513973  
## 28 0.3365296 2.1564513 0.1435396 0.2088999 2.3851537 -0.8881945  
## 98 11.8338301 -1.1370386 3.8661378 3.2061167 5.9965677 -3.2048047  
## 69 9.5737087 0.5159850 -3.1763078 1.2522966 -1.1845612 0.8632720  
## PC25 PC26 PC27 PC28 PC29 PC30  
## 152 -0.12292421 -0.7867437 1.041245882 -0.59973225 1.0322935 -0.3956907  
## 36 2.44455595 4.0350022 -0.563708817 1.35239344 0.1880745 -1.4622059  
## 149 -8.88088367 6.5226454 -0.867013446 -1.05309915 1.1271464 -0.4615466  
## 28 -1.49171312 0.1899231 1.056563446 -0.24936003 -1.0277041 -1.0788507  
## 98 0.27724155 0.8751587 1.206520397 -0.84748177 1.5294236 -0.6787185  
## 69 -0.03934859 0.2864767 -0.007123851 -0.06283113 -0.4929581 -0.1346926  
## PC31 PC32 PC33 PC34 PC35 PC36  
## 152 -0.502169524 -0.77107740 1.04576928 -0.6900370 0.1864019 -0.05357128  
## 36 1.031503295 -0.57246239 0.63702195 0.4092001 0.2450605 0.37177814  
## 149 -1.039195087 0.49928215 -0.21505408 0.5092245 -0.3345344 0.36122379  
## 28 0.100192869 -0.03952563 -0.88174625 0.5515479 -0.2935234 -0.17478360  
## 98 0.230202145 -1.12380826 -0.91579811 -0.5590573 0.2358495 0.21757059  
## 69 0.007896324 0.28607134 0.05834966 0.2499306 0.5507385 0.06891191  
## PC37 PC38 PC39 PC40 PC41  
## 152 0.09095809 0.007809402 -0.01236714 -0.08807170 0.09441480  
## 36 0.29300725 0.511218508 -0.22957174 0.37977178 0.06882908  
## 149 -0.18504197 -0.148213862 -0.34140411 -0.06450147 0.41275330  
## 28 0.84965643 -0.404284231 -0.78819775 -0.50106034 -0.29218599  
## 98 -0.35332667 0.054580584 -0.23979254 -0.38630526 -0.24581268  
## 69 0.09758912 -0.006338407 -0.17604138 -0.21269715 -0.09172092  
## PC42 PC43 PC44 PC45 PC46  
## 152 -0.109180391 0.35381672 0.09392853 -0.25998642 -0.24436142  
## 36 0.141001098 -0.03165249 0.35782881 0.30665031 -0.23395347  
## 149 -0.007744521 -0.08631472 -0.31485414 -0.08451732 0.03687579  
## 28 -0.726005367 -0.25969546 -0.17617762 -0.13269174 -0.34372244  
## 98 0.022062888 -0.03339716 -0.16073291 0.02705914 0.05710411  
## 69 0.419804402 -0.20566962 0.12518662 -0.11420992 -0.02228046  
## PC47 PC48 PC49 PC50 PC51  
## 152 0.08597729 0.07194429 -0.128082332 0.09055951 0.20650606  
## 36 -0.17660969 -0.11055841 0.007618655 0.12598167 0.03496086  
## 149 0.14186982 -0.03419609 0.191563785 0.16243699 0.05712194  
## 28 -0.08933813 -0.02296344 -0.049116088 -0.23742174 -0.02227548  
## 98 0.14778915 -0.12555646 -0.035370547 0.11017801 -0.05896726  
## 69 0.09560322 -0.11217076 0.096021909 0.02835558 -0.06240439  
## PC52 PC53 PC54 PC55  
## 152 0.054108017 -0.09239233 -0.023838727 -0.009589878  
## 36 0.007448452 -0.07691477 0.037577037 0.021037570  
## 149 0.090119356 0.01078895 0.018835652 -0.030453879  
## 28 0.112978719 0.08035633 -0.049135831 -0.016163536  
## 98 0.016441841 0.02217938 -0.004892329 0.052564295  
## 69 -0.102572377 -0.06986863 -0.057532824 0.052782949

#Apply normalization (scaling and centering) to the data.  
#Recalculate PCA with normalized data.   
GDPdataTrainSet.pca.normdata <- prcomp(GDPdata.train.set, scale = TRUE, center= TRUE)  
GDPdataTrainSet.pca.normdata$rotation # eigen vector / rotation matrix / tranformation matrix

## PC1 PC2 PC3 PC4  
## GDP.USD..In\_Millions. 0.08399864 -0.198668525 0.171943518 -0.187059952  
## MealInexpensive 0.16005766 0.105146442 0.125150017 0.090100576  
## MealFor2 0.17133015 0.095073845 0.067839225 0.065869343  
## McMealMcDonalds 0.15340284 0.116595881 0.049073829 0.166716893  
## DomesticBeer 0.16266360 -0.029050743 0.009309912 0.190781902  
## ImportedBeer 0.15292167 -0.135938134 0.001265121 0.183055003  
## CokeOrPepsi 0.14853753 0.201824716 0.092908139 0.034958384  
## Water1Litre 0.15059764 0.185761163 0.113905083 0.034767542  
## Milk1Litre 0.07289759 -0.104964005 -0.330475008 -0.092844632  
## LoafofBread 0.16349943 -0.097327172 0.078380690 -0.094747777  
## Eggs 0.15572534 0.094084753 -0.026779334 0.015962853  
## LocalCheese 0.12570720 -0.023918281 -0.226960583 -0.195015357  
## Water2Litre 0.14461172 -0.144846755 0.123272647 0.008761682  
## BottleofWine 0.08050177 -0.290819688 -0.160983444 0.103735976  
## Domestic1LitreBeer 0.09609039 -0.220264110 -0.018672369 0.381179521  
## Imported1LitreBeer 0.06931951 -0.232662324 -0.082248023 0.397371765  
## Cigarettes20Pack 0.12996470 -0.054866163 0.140323056 0.193471517  
## OnewayTicket 0.15422568 0.123854269 0.123412415 0.089276058  
## ChickenBreasts 0.16112261 0.069218345 0.027621612 -0.008347020  
## MonthlyPass 0.16022614 0.018229706 0.087344684 0.112178193  
## Gasoline1Litre 0.05484158 0.284632937 -0.151770365 -0.007300457  
## VWGolf 0.04381551 -0.054639929 -0.344264922 0.121998088  
## Apartment1BD 0.16467230 -0.054666511 0.014889179 -0.095815498  
## Apartment1BDOOC 0.16379889 -0.036632887 0.056843440 -0.085470856  
## Apartment3BDICC 0.16116400 -0.077936075 -0.045037254 -0.126926744  
## Apartment3BDOOC 0.16430139 -0.047729185 0.013543183 -0.118793239  
## BasicUtilities 0.09143019 0.246299782 0.019505552 -0.131489473  
## PrepaidMobile1MIn 0.09653559 0.038477330 0.068210312 0.156782044  
## Internet 0.12929543 -0.115165723 0.202576417 0.082600759  
## GymFees 0.12130519 -0.057917247 -0.234341756 0.016354469  
## TennisCourtFeesPerHour 0.09513121 0.156399681 -0.042892770 0.085546359  
## CinemaPerPerson 0.17443184 0.042923305 0.043327717 0.025675223  
## PairofJeans 0.08086117 0.328972052 -0.166749860 0.030491424  
## SummerDress 0.03645692 0.028432127 -0.149395310 0.248695857  
## NikeRunningShoes 0.06962327 0.163808133 -0.186787660 0.142769919  
## LeatherShoes 0.13847220 0.183179088 -0.122477920 -0.083047161  
## AptPricePerSquareM 0.12394888 -0.035769662 -0.273310552 -0.177130422  
## AptPricePerSqMOOC 0.13064596 0.000986787 -0.233185423 -0.168621772  
## AvgMnthlyNetSalary 0.17012721 -0.046797907 0.112824585 -0.047064782  
## MortgageInterest -0.09797985 -0.083918030 -0.020970149 0.081067133  
## TaxiStartingFare 0.14491638 0.158906636 -0.015884913 0.065274406  
## Taxi1KM 0.13514360 0.095482138 0.095205048 0.013377829  
## Taxi1HRWaiting 0.15962598 0.140931421 0.082592484 0.074852226  
## Apples1KG 0.13923239 -0.207359544 -0.034963026 -0.094239133  
## Oranges1KG 0.14817930 -0.139419626 -0.014965021 -0.156826602  
## Potato1KG 0.15855953 -0.138580017 0.000329006 -0.105284165  
## Lettuce1Head 0.14922623 -0.027732556 0.016677673 -0.004766706  
## CappucinoReg 0.15615550 -0.090542535 -0.027314442 -0.025069867  
## WhiteRice 0.14526550 -0.124621889 0.104132705 -0.125763020  
## Tomato1KG 0.15954476 -0.042301318 0.051640162 -0.152305541  
## Banana1KG 0.13253027 0.029619942 -0.148583627 -0.002734833  
## Onion1KG 0.15672271 -0.137993518 0.013250167 -0.119446098  
## BeefRound1KG 0.13944609 0.066701136 -0.147014301 -0.063181865  
## ToyotaCorolla 0.01984683 -0.048873118 -0.305043565 0.185532902  
## PreschoolperMonth 0.15592650 0.009533634 0.061064080 -0.015711124  
## PC5 PC6 PC7  
## GDP.USD..In\_Millions. 0.163837366 -0.2713555478 -0.159978083  
## MealInexpensive 0.020048411 -0.0871435216 -0.022834781  
## MealFor2 0.022723649 -0.0963847841 -0.003751048  
## McMealMcDonalds 0.002939754 -0.0477813558 -0.092332938  
## DomesticBeer 0.131568694 0.0214986897 0.011179037  
## ImportedBeer 0.123787251 0.0103715512 0.001454507  
## CokeOrPepsi 0.050722285 0.0874101044 -0.073909023  
## Water1Litre 0.066790918 0.0482140875 -0.022958015  
## Milk1Litre -0.201189211 0.1097793773 0.200751565  
## LoafofBread -0.032590773 -0.0426488615 0.039373241  
## Eggs -0.067308875 0.1226341135 0.095792365  
## LocalCheese -0.049827361 -0.0131600026 -0.090085392  
## Water2Litre -0.035743663 0.0000681467 0.138529991  
## BottleofWine -0.017234172 0.0075584277 -0.024692150  
## Domestic1LitreBeer 0.013510213 0.1165431934 0.093277651  
## Imported1LitreBeer -0.042708815 0.0791829584 0.091352335  
## Cigarettes20Pack 0.119248591 0.1604848613 0.269164700  
## OnewayTicket 0.070155191 0.0570168688 -0.018042642  
## ChickenBreasts -0.098817728 -0.0213040322 -0.036948331  
## MonthlyPass 0.080791173 0.0459370412 0.054311684  
## Gasoline1Litre 0.176023561 0.3003242009 0.029469988  
## VWGolf 0.237056983 -0.0022489031 -0.380979361  
## Apartment1BD 0.216282550 -0.1208401474 0.098102951  
## Apartment1BDOOC 0.223827058 -0.1142653763 0.094488238  
## Apartment3BDICC 0.193910985 -0.0980786332 0.123609155  
## Apartment3BDOOC 0.209626364 -0.1109753491 0.112324204  
## BasicUtilities 0.112960445 0.0577572027 -0.088619878  
## PrepaidMobile1MIn -0.215812851 0.2559780107 0.050357874  
## Internet -0.043152961 -0.0103058797 -0.075367349  
## GymFees -0.038283262 -0.0386520113 0.052652337  
## TennisCourtFeesPerHour -0.173580362 -0.1658266175 -0.139931444  
## CinemaPerPerson 0.015224154 -0.0160020161 0.019555674  
## PairofJeans 0.001816497 -0.0743660885 0.112522686  
## SummerDress -0.195021389 -0.4809863247 0.125509287  
## NikeRunningShoes -0.127763564 -0.3665428027 0.097512943  
## LeatherShoes -0.112859505 -0.1871375055 0.037659966  
## AptPricePerSquareM 0.125127126 0.0752414305 0.236679062  
## AptPricePerSqMOOC 0.143705070 0.0776991485 0.281882621  
## AvgMnthlyNetSalary 0.100868171 -0.0856277774 -0.036515363  
## MortgageInterest -0.098560724 -0.2530509246 0.045729182  
## TaxiStartingFare -0.055402766 0.0032183183 -0.077739923  
## Taxi1KM -0.154344099 0.0590304622 -0.203179465  
## Taxi1HRWaiting -0.018887380 0.0296366851 -0.085835653  
## Apples1KG -0.151568652 0.0345898997 -0.179289568  
## Oranges1KG -0.167923162 0.0480717380 -0.136145053  
## Potato1KG -0.130512580 0.0763479338 -0.054375495  
## Lettuce1Head -0.211052964 0.1010042385 0.057126522  
## CappucinoReg 0.014901982 -0.0516962014 0.016640981  
## WhiteRice -0.085377694 -0.0529191282 -0.188822548  
## Tomato1KG -0.125763153 0.0058232243 -0.022279744  
## Banana1KG -0.142497933 0.1857807719 -0.025063647  
## Onion1KG -0.114128965 0.0796886559 -0.091387087  
## BeefRound1KG -0.239136912 0.0464896929 -0.147830287  
## ToyotaCorolla 0.319242131 0.0259474635 -0.443636794  
## PreschoolperMonth 0.085540794 -0.1251300823 0.031221566  
## PC8 PC9 PC10  
## GDP.USD..In\_Millions. 0.148450441 -0.020442148 0.104223637  
## MealInexpensive -0.043172098 -0.085904316 -0.062140765  
## MealFor2 0.024237327 -0.102462507 0.044681042  
## McMealMcDonalds 0.065053718 -0.184601816 -0.031765763  
## DomesticBeer 0.135761245 -0.006749117 -0.061506350  
## ImportedBeer 0.177153986 -0.027474413 -0.006969765  
## CokeOrPepsi 0.023628449 0.030686486 -0.133548629  
## Water1Litre 0.015938538 0.049183922 -0.147974361  
## Milk1Litre -0.060955721 -0.237579871 0.148063127  
## LoafofBread -0.015796164 -0.098893101 -0.019911506  
## Eggs -0.072215154 -0.220929214 -0.071642206  
## LocalCheese 0.030910855 -0.232720475 -0.141434705  
## Water2Litre -0.148836906 -0.043869588 0.031619764  
## BottleofWine 0.199670095 -0.078869348 0.041525265  
## Domestic1LitreBeer 0.066638082 0.166135678 -0.064986266  
## Imported1LitreBeer 0.187959681 0.020050459 0.009982679  
## Cigarettes20Pack -0.096547384 0.184949470 -0.108234831  
## OnewayTicket 0.015520577 0.035204732 -0.044435356  
## ChickenBreasts -0.030325758 -0.227678190 -0.241547687  
## MonthlyPass -0.085402991 0.144173867 0.111652513  
## Gasoline1Litre 0.027417189 -0.040676198 0.053152689  
## VWGolf -0.272935224 0.065038466 0.079582418  
## Apartment1BD -0.080272633 -0.014154708 0.031912600  
## Apartment1BDOOC -0.091603734 -0.013615081 0.003158112  
## Apartment3BDICC -0.054558214 -0.020371899 0.066321620  
## Apartment3BDOOC -0.070510737 -0.040988336 0.015475288  
## BasicUtilities 0.094321625 0.355446328 0.277343253  
## PrepaidMobile1MIn -0.336043171 -0.109658372 0.368961713  
## Internet -0.228099564 -0.178211111 0.271676434  
## GymFees 0.040361332 -0.009956941 0.262608091  
## TennisCourtFeesPerHour 0.406145588 -0.075657874 0.139434302  
## CinemaPerPerson 0.081471330 -0.003448919 0.083240003  
## PairofJeans 0.039401795 0.146508237 0.056195475  
## SummerDress 0.040932612 0.170090692 0.032615536  
## NikeRunningShoes -0.268828530 0.095059525 0.078336230  
## LeatherShoes -0.048209632 0.093182647 0.090584048  
## AptPricePerSquareM 0.060338169 -0.009693000 -0.050601422  
## AptPricePerSqMOOC 0.026167126 -0.023182596 -0.077448943  
## AvgMnthlyNetSalary -0.021851013 0.043642589 -0.104825996  
## MortgageInterest -0.344109042 -0.009062192 -0.363910915  
## TaxiStartingFare 0.006909098 -0.074484385 0.078440453  
## Taxi1KM -0.088348250 -0.213871876 0.089971118  
## Taxi1HRWaiting 0.034299095 -0.049719467 -0.166256900  
## Apples1KG 0.058593009 0.128802827 -0.012595964  
## Oranges1KG 0.033863866 0.225112021 -0.042059150  
## Potato1KG -0.137597298 0.126222580 0.023972555  
## Lettuce1Head -0.006171154 0.112712058 -0.161132911  
## CappucinoReg 0.233925177 -0.146333107 0.083230396  
## WhiteRice -0.013741221 0.111812104 0.092973382  
## Tomato1KG 0.007040310 0.309857782 -0.037002144  
## Banana1KG -0.050100736 0.284649192 -0.160474470  
## Onion1KG -0.117277936 0.076723954 0.030145045  
## BeefRound1KG 0.076859210 -0.059739140 -0.296387741  
## ToyotaCorolla -0.163401399 -0.005069459 -0.087693742  
## PreschoolperMonth -0.091673837 -0.069995429 -0.150500157  
## PC11 PC12 PC13  
## GDP.USD..In\_Millions. -0.0636256046 0.1277059410 -0.154576928  
## MealInexpensive 0.0351859649 -0.0297519010 -0.015528767  
## MealFor2 0.0623505225 -0.0874151845 0.035398215  
## McMealMcDonalds 0.0409546853 0.0191522312 -0.118204459  
## DomesticBeer 0.0279526753 -0.1510272183 -0.078874135  
## ImportedBeer 0.0457728268 -0.1565260318 -0.095597456  
## CokeOrPepsi 0.0772745852 0.0360984243 -0.065579204  
## Water1Litre 0.1268276277 0.0389129549 -0.032516561  
## Milk1Litre 0.2068191002 -0.0414758498 0.024095269  
## LoafofBread 0.1215278391 -0.1003158501 0.027360722  
## Eggs 0.0205693672 0.1703926079 -0.191799131  
## LocalCheese 0.0567566302 0.1807714976 0.051112576  
## Water2Litre 0.2470738469 -0.3052254207 -0.046030057  
## BottleofWine 0.1883082566 0.2097911959 0.097020047  
## Domestic1LitreBeer -0.0787924018 0.0597397812 -0.100344608  
## Imported1LitreBeer -0.1671026240 0.0633795886 -0.102429101  
## Cigarettes20Pack 0.1097180591 0.1955130707 0.153649532  
## OnewayTicket 0.0711109610 0.0130472961 0.169103204  
## ChickenBreasts 0.1117351565 0.0630690926 -0.119736229  
## MonthlyPass -0.0465669665 0.0433858719 0.224705519  
## Gasoline1Litre -0.1139293351 -0.1840551774 -0.294759658  
## VWGolf 0.1295708809 -0.0170760254 0.125078559  
## Apartment1BD -0.1008359651 -0.0073274193 0.083165920  
## Apartment1BDOOC -0.0899122733 -0.0010127796 0.055352840  
## Apartment3BDICC -0.1251350111 0.0057396536 0.050931808  
## Apartment3BDOOC -0.1044012232 0.0156726889 0.019858968  
## BasicUtilities 0.0294555375 0.1197530790 -0.292461593  
## PrepaidMobile1MIn -0.1933756600 0.0444739885 0.113240568  
## Internet 0.0181834145 -0.0001366291 -0.101669747  
## GymFees -0.1713004438 0.0541981838 -0.070534877  
## TennisCourtFeesPerHour -0.2924286104 -0.2037474677 0.502162163  
## CinemaPerPerson -0.0485300163 -0.0422456919 -0.007906749  
## PairofJeans 0.0691006754 -0.0046236992 0.047783891  
## SummerDress 0.0198848160 0.0489785842 -0.303114792  
## NikeRunningShoes 0.1914751627 0.1858197237 0.066014925  
## LeatherShoes 0.1065523993 -0.0644226476 0.015274470  
## AptPricePerSquareM -0.1032040312 -0.1152853556 0.001110126  
## AptPricePerSqMOOC -0.1171193468 -0.0820433917 -0.021089476  
## AvgMnthlyNetSalary -0.0218130427 0.0824768649 -0.034057971  
## MortgageInterest -0.3597534479 -0.3725891885 -0.115557327  
## TaxiStartingFare -0.0210832180 -0.2358094137 -0.040697012  
## Taxi1KM -0.2646264898 0.0553915519 -0.090801781  
## Taxi1HRWaiting 0.0095501157 -0.0113030937 0.075348315  
## Apples1KG -0.0428983626 0.0048211128 -0.035825146  
## Oranges1KG 0.0623131247 -0.0091713310 0.003588513  
## Potato1KG -0.0551628130 0.0697870889 -0.031909475  
## Lettuce1Head 0.2717551611 -0.2637069967 0.167527063  
## CappucinoReg 0.0689820647 -0.1096790501 -0.090467430  
## WhiteRice 0.0126382294 -0.1730278417 -0.189448967  
## Tomato1KG 0.0070621551 -0.1140653314 0.128446707  
## Banana1KG -0.3014150773 0.0396768456 -0.036080036  
## Onion1KG -0.0003397527 0.0112536794 0.001873210  
## BeefRound1KG -0.0757034868 0.2442417967 -0.074551333  
## ToyotaCorolla 0.0694866353 -0.1180675568 0.062589682  
## PreschoolperMonth -0.2079586284 0.3078350777 0.194026597  
## PC14 PC15 PC16 PC17  
## GDP.USD..In\_Millions. 0.361953578 -0.13465604 0.0276271664 -0.026751772  
## MealInexpensive 0.076210092 0.16067993 0.1454692588 -0.063887968  
## MealFor2 -0.038839480 0.05216490 -0.0400681736 -0.001747257  
## McMealMcDonalds -0.055117675 0.08724634 0.0353997115 0.013243459  
## DomesticBeer 0.099591220 0.06644210 -0.0243280736 0.095393830  
## ImportedBeer 0.148105664 0.08395302 0.0501470047 0.086153187  
## CokeOrPepsi 0.043141027 0.08214002 -0.0458256789 -0.011258810  
## Water1Litre -0.078198600 0.05386656 -0.1404357933 0.037134953  
## Milk1Litre 0.038748007 -0.07320619 -0.1501564251 0.090021038  
## LoafofBread 0.105941925 0.02720813 0.1068841617 0.027290609  
## Eggs 0.204696654 0.23556458 0.0405715331 0.058968342  
## LocalCheese 0.088094673 -0.01710159 0.0138307481 -0.191149019  
## Water2Litre -0.056765265 0.07000843 0.0831905952 0.079929341  
## BottleofWine 0.140670420 -0.06624716 -0.1146574374 -0.320017611  
## Domestic1LitreBeer -0.006483843 0.00169864 -0.0497869972 0.004121729  
## Imported1LitreBeer -0.061711319 -0.09045175 0.0564632315 -0.213919740  
## Cigarettes20Pack -0.062140665 -0.02800842 0.0176381917 -0.015960855  
## OnewayTicket -0.006824014 -0.16146899 -0.2754564690 0.061673070  
## ChickenBreasts -0.133255343 0.08298367 0.0170521453 0.088077356  
## MonthlyPass 0.022538908 -0.14228291 -0.2119852863 0.145534255  
## Gasoline1Litre -0.017350819 -0.08646277 0.2015249165 -0.032054897  
## VWGolf 0.110364340 0.11676288 -0.0631726057 0.094272833  
## Apartment1BD -0.061234751 0.03731166 0.0960642999 -0.051172980  
## Apartment1BDOOC -0.058605224 0.06156720 0.1261926860 -0.019658473  
## Apartment3BDICC -0.061703651 0.00352356 0.0587127779 -0.099198919  
## Apartment3BDOOC -0.057832021 0.03735658 0.0986103682 -0.033370205  
## BasicUtilities 0.053760294 0.15397689 -0.2573329579 -0.276127795  
## PrepaidMobile1MIn 0.357375262 -0.05629343 0.3230775457 -0.029813393  
## Internet -0.130207748 0.08156510 -0.2330694255 -0.099029645  
## GymFees -0.278675611 0.53766086 -0.1476667861 0.061562951  
## TennisCourtFeesPerHour 0.003457660 0.17918740 0.0213342266 0.089580748  
## CinemaPerPerson 0.041339151 -0.12257666 -0.1127981811 0.132140218  
## PairofJeans 0.101136821 -0.03224120 0.1090173363 -0.281784562  
## SummerDress -0.182862971 -0.13669464 0.2847981136 0.071630132  
## NikeRunningShoes 0.087756042 -0.13304774 -0.1948436811 0.208853560  
## LeatherShoes 0.067799266 -0.02015197 0.0653047608 -0.100933232  
## AptPricePerSquareM -0.054409127 -0.16368328 -0.0777525489 0.099496680  
## AptPricePerSqMOOC -0.076334834 -0.15519132 -0.0825308227 0.098805488  
## AvgMnthlyNetSalary -0.003130789 0.01644783 -0.0006648729 0.085456248  
## MortgageInterest 0.211520156 0.08495870 -0.3453400399 -0.278894189  
## TaxiStartingFare -0.016987638 -0.33128031 0.0245819855 -0.273881403  
## Taxi1KM -0.363745040 -0.25940289 -0.1692129399 -0.027786308  
## Taxi1HRWaiting 0.025104005 -0.19984511 -0.0513270640 0.044895742  
## Apples1KG -0.169905270 -0.15398317 0.0468641624 0.085125578  
## Oranges1KG -0.057072063 -0.02583415 0.0176235117 -0.119827972  
## Potato1KG -0.078928845 -0.03994184 0.0362719826 0.009744033  
## Lettuce1Head -0.091031379 0.17950332 0.0608361927 -0.230256497  
## CappucinoReg 0.235131119 -0.07491407 -0.2261689741 -0.012060090  
## WhiteRice 0.091542602 -0.03679112 0.0917549683 0.309918623  
## Tomato1KG -0.006921173 0.01421102 0.0945477523 -0.030657901  
## Banana1KG 0.267997757 0.08882921 -0.0557294772 0.214225392  
## Onion1KG -0.099133729 0.02014018 0.0090584625 -0.195285028  
## BeefRound1KG 0.059295138 0.03923593 0.0572899246 0.076700643  
## ToyotaCorolla -0.120815264 -0.07146664 0.1635031487 -0.023518901  
## PreschoolperMonth -0.027821492 0.01843403 0.1266811423 -0.131382315  
## PC18 PC19 PC20  
## GDP.USD..In\_Millions. -0.0746560007 0.1123560921 -0.128101299  
## MealInexpensive 0.0721187724 0.0467746753 0.181460788  
## MealFor2 -0.0135555601 0.0006208602 0.059762628  
## McMealMcDonalds 0.1796872194 0.2602092460 -0.228256752  
## DomesticBeer 0.0297481706 -0.0561555472 0.055950528  
## ImportedBeer -0.0292951733 0.1176832771 -0.089606846  
## CokeOrPepsi -0.0079834566 -0.0165148249 -0.270718203  
## Water1Litre 0.1125725039 -0.0928481865 -0.188856332  
## Milk1Litre 0.2043211730 -0.0396662139 0.246843284  
## LoafofBread -0.0757376032 -0.0579230291 -0.274172456  
## Eggs 0.0638974313 -0.0468194092 0.100149739  
## LocalCheese 0.2304487346 0.0097967682 -0.224203283  
## Water2Litre 0.0997377866 -0.0985457569 0.001271300  
## BottleofWine -0.1313591977 -0.2497530941 -0.098150284  
## Domestic1LitreBeer -0.1010873146 -0.1473927103 0.089413148  
## Imported1LitreBeer -0.0944871023 -0.0782455676 -0.044890783  
## Cigarettes20Pack 0.1942233871 0.2225761016 -0.058869457  
## OnewayTicket -0.0657175465 -0.0702004320 -0.005450170  
## ChickenBreasts -0.0446550180 -0.0469700627 0.038379387  
## MonthlyPass 0.1656274314 -0.0224870961 0.063096627  
## Gasoline1Litre -0.1728188879 -0.3354313898 -0.054766502  
## VWGolf 0.0471769302 -0.1079576906 -0.006248284  
## Apartment1BD -0.0780842761 -0.0117271405 0.046872098  
## Apartment1BDOOC -0.0442901578 -0.0832383898 0.065168559  
## Apartment3BDICC -0.1272852604 0.0273465546 -0.028255975  
## Apartment3BDOOC -0.0627750327 -0.0595086596 -0.013186274  
## BasicUtilities 0.3317826426 -0.0374482471 0.003263511  
## PrepaidMobile1MIn 0.1691934317 0.1052510384 -0.174013154  
## Internet -0.1623167553 -0.1370585101 -0.012854405  
## GymFees -0.2063400632 0.3451561780 -0.045375177  
## TennisCourtFeesPerHour 0.1411757322 -0.2099161992 -0.129113169  
## CinemaPerPerson 0.0501241364 -0.0417643647 -0.005330400  
## PairofJeans -0.1282630272 -0.0002165204 0.077923041  
## SummerDress 0.2992540944 -0.0954310291 -0.027211379  
## NikeRunningShoes -0.2886216968 0.0405253594 -0.169659493  
## LeatherShoes -0.1229908200 -0.1627793304 0.091671439  
## AptPricePerSquareM 0.0427718219 0.0888097233 -0.132569013  
## AptPricePerSqMOOC 0.1272169850 -0.0111581286 -0.165522401  
## AvgMnthlyNetSalary 0.0120477378 0.0189418238 0.097146394  
## MortgageInterest 0.1477577918 -0.0352557395 -0.109154038  
## TaxiStartingFare -0.2002012554 0.4708578861 0.121001254  
## Taxi1KM 0.0665568841 -0.1151985102 0.091164219  
## Taxi1HRWaiting -0.1747682994 0.0539172485 -0.050993325  
## Apples1KG 0.0945874117 0.1482272961 -0.172863981  
## Oranges1KG 0.0623783183 0.1159116769 0.078565703  
## Potato1KG 0.0024997944 -0.0925096973 -0.034511376  
## Lettuce1Head -0.0534370434 0.0405832856 0.064329377  
## CappucinoReg 0.1192151717 0.1018753585 0.349056886  
## WhiteRice -0.0408698931 -0.1131475753 0.112415190  
## Tomato1KG 0.0009782967 -0.0317285603 0.042306371  
## Banana1KG -0.1501714440 0.0707483237 0.119856857  
## Onion1KG -0.0675509214 -0.1485020656 -0.166020792  
## BeefRound1KG -0.1363320858 0.0061628849 0.070070379  
## ToyotaCorolla 0.1292487647 0.0975437750 0.094712513  
## PreschoolperMonth 0.1262965264 -0.0660637630 0.347670027  
## PC21 PC22 PC23 PC24  
## GDP.USD..In\_Millions. 0.21119394 0.066951333 -0.186289380 -0.1920517664  
## MealInexpensive 0.10024484 -0.113989148 0.113684826 -0.0233460086  
## MealFor2 0.02230242 0.006547060 -0.024972248 0.0128237337  
## McMealMcDonalds 0.05370026 0.152591245 -0.155398822 0.2717637607  
## DomesticBeer -0.07212158 -0.165168133 0.094201177 0.0381429720  
## ImportedBeer -0.09148254 -0.118896029 0.079242534 0.0108587939  
## CokeOrPepsi -0.02764614 0.020636945 -0.047572782 -0.1812716369  
## Water1Litre -0.03488100 0.094658768 -0.057962671 -0.2178429601  
## Milk1Litre 0.13028694 -0.024234514 -0.179408602 0.0129991676  
## LoafofBread -0.05497251 0.282801201 -0.060883296 -0.0075787427  
## Eggs -0.02957304 0.272877209 0.063772316 0.1471819568  
## LocalCheese 0.45621690 -0.212725398 0.063411456 -0.0286614606  
## Water2Litre 0.15976247 0.240445901 0.004228753 0.0443417542  
## BottleofWine -0.37696572 0.055325193 -0.224425610 0.3576860211  
## Domestic1LitreBeer 0.07683335 -0.114232259 0.076441636 -0.0815930701  
## Imported1LitreBeer 0.28215755 -0.036386315 -0.024465559 -0.2640035341  
## Cigarettes20Pack 0.07091809 0.123396617 -0.190902558 0.0554009251  
## OnewayTicket 0.11816556 -0.193118191 -0.030763925 0.2011082909  
## ChickenBreasts -0.14876553 -0.307486966 0.133816601 0.0688697522  
## MonthlyPass 0.10661636 -0.056107363 0.033380750 0.2340311685  
## Gasoline1Litre 0.16560731 -0.011156540 -0.154414334 0.2258963385  
## VWGolf 0.06814779 0.047743472 -0.079122419 -0.2076841943  
## Apartment1BD -0.05225726 0.004675055 0.015248616 -0.0097649717  
## Apartment1BDOOC -0.06677873 0.006520724 0.014169541 0.0592155304  
## Apartment3BDICC -0.07720244 -0.013940849 0.070844638 0.0087564368  
## Apartment3BDOOC -0.07578836 0.002016404 0.052632718 0.0450400372  
## BasicUtilities -0.13426742 -0.096251169 0.101882845 0.0160788082  
## PrepaidMobile1MIn -0.25624535 -0.262504773 0.000836009 -0.1272661603  
## Internet 0.21695238 0.040576699 0.411315332 -0.0204530227  
## GymFees 0.01033582 -0.103597126 -0.280667089 0.0275791687  
## TennisCourtFeesPerHour 0.01927241 0.093995561 0.131498089 0.0319012440  
## CinemaPerPerson 0.06351453 -0.040957169 -0.149711261 -0.0131855667  
## PairofJeans 0.16795359 0.136129906 0.060526752 0.0090836697  
## SummerDress -0.10641845 0.053988185 0.039520082 -0.0003635546  
## NikeRunningShoes -0.02227250 -0.020938920 0.114819375 0.0048755360  
## LeatherShoes 0.02882598 -0.060577061 -0.224504943 -0.1122303810  
## AptPricePerSquareM -0.05717304 -0.077002356 0.077997664 -0.1259683061  
## AptPricePerSqMOOC -0.11716841 -0.041393870 0.141497645 -0.1199035461  
## AvgMnthlyNetSalary -0.08814237 -0.087631098 -0.083254118 -0.1355734642  
## MortgageInterest -0.02011206 -0.066119731 -0.132898586 0.1371298989  
## TaxiStartingFare 0.02658394 0.038321143 0.084927695 0.1563163533  
## Taxi1KM -0.14212545 0.179434313 -0.277843424 -0.2262952245  
## Taxi1HRWaiting -0.14136641 -0.042877137 -0.115196141 -0.1258456607  
## Apples1KG 0.09735253 0.056805175 0.108638885 0.1791115789  
## Oranges1KG -0.00657787 -0.104878825 0.032482984 0.0531835246  
## Potato1KG 0.02277357 0.186115014 0.101651030 0.0294357602  
## Lettuce1Head -0.04540053 -0.052371054 -0.126555956 -0.2899623578  
## CappucinoReg -0.18818853 0.190961001 0.168080996 -0.1836638985  
## WhiteRice 0.06943917 -0.260252220 -0.243410242 0.1325090944  
## Tomato1KG 0.03266153 -0.055607076 -0.012532381 0.0951231799  
## Banana1KG 0.05003898 0.351590927 0.033815542 0.0138339499  
## Onion1KG -0.13454986 0.031300038 0.144935337 0.0079523670  
## BeefRound1KG -0.05964955 -0.085237259 0.164268363 0.0105596265  
## ToyotaCorolla -0.11487601 0.085914095 0.075596594 0.0417176755  
## PreschoolperMonth 0.08862116 -0.005273040 -0.119726529 0.0453514560  
## PC25 PC26 PC27  
## GDP.USD..In\_Millions. 0.1201171498 0.0207230789 0.018322086  
## MealInexpensive -0.0509933263 -0.2976684092 -0.011281415  
## MealFor2 -0.0683986815 -0.0825096010 0.126002272  
## McMealMcDonalds -0.1430852514 0.0640933995 0.013182031  
## DomesticBeer -0.2998150571 -0.0409139321 0.043183351  
## ImportedBeer -0.1904028227 -0.0392861061 0.035771155  
## CokeOrPepsi -0.0006652991 -0.3429458105 -0.132416931  
## Water1Litre 0.0846647100 -0.2086076739 -0.100115776  
## Milk1Litre 0.0308547229 -0.2402917205 -0.238745305  
## LoafofBread 0.2239445149 0.0730071794 -0.171725263  
## Eggs -0.0117129511 0.2035598975 -0.077706584  
## LocalCheese -0.1823480963 0.0589501539 0.308422113  
## Water2Litre -0.0211859762 0.1204648282 0.168854148  
## BottleofWine -0.0017903254 -0.1207826781 0.152116955  
## Domestic1LitreBeer -0.0518783189 0.0464873556 0.002607962  
## Imported1LitreBeer -0.0112245586 0.0687848403 -0.212426234  
## Cigarettes20Pack -0.1086809969 0.0917941026 -0.039157047  
## OnewayTicket 0.3629607613 -0.0340841369 0.149085148  
## ChickenBreasts 0.0897731504 0.1363081736 -0.078572165  
## MonthlyPass 0.1939669598 0.0158445678 0.091918486  
## Gasoline1Litre 0.0685126482 0.0481720012 0.056774932  
## VWGolf 0.0823158926 0.3105913981 0.053982709  
## Apartment1BD -0.0242023625 0.0470873789 0.083419223  
## Apartment1BDOOC -0.0512745549 0.0909793827 0.065202810  
## Apartment3BDICC 0.0073936507 -0.0763399348 0.078801983  
## Apartment3BDOOC -0.0236827130 -0.0005861675 0.072291226  
## BasicUtilities -0.0882937525 0.1369139423 -0.058027958  
## PrepaidMobile1MIn 0.1047874331 -0.0297266795 0.065450646  
## Internet 0.1007050703 -0.1429169387 0.077062959  
## GymFees 0.1748150229 -0.0344740246 -0.023405526  
## TennisCourtFeesPerHour -0.0347178264 0.0368065572 -0.079650086  
## CinemaPerPerson 0.1050494685 0.2111102247 -0.141953712  
## PairofJeans 0.1808543789 0.0375756815 -0.159972991  
## SummerDress 0.2738622855 -0.0189948052 0.210113211  
## NikeRunningShoes -0.3378078230 0.1060251464 -0.096819083  
## LeatherShoes -0.1478880863 -0.2925387591 0.060765736  
## AptPricePerSquareM 0.0468134041 0.0097675679 -0.007121722  
## AptPricePerSqMOOC -0.0421848550 -0.0209587661 -0.029591250  
## AvgMnthlyNetSalary 0.2064155231 -0.0175747856 0.007700661  
## MortgageInterest 0.0615698106 -0.0030739651 -0.095662447  
## TaxiStartingFare -0.0196127130 0.0928056341 -0.060926329  
## Taxi1KM -0.2438760462 0.1135566452 0.209081399  
## Taxi1HRWaiting 0.0197302071 0.0027712043 -0.016442249  
## Apples1KG 0.0358302170 -0.1557398133 -0.122197875  
## Oranges1KG 0.0267417746 -0.0731153089 0.204403040  
## Potato1KG -0.0390999195 -0.1154081574 -0.170804403  
## Lettuce1Head 0.0822710336 0.1608098667 0.176348819  
## CappucinoReg 0.0606505693 0.0652143806 -0.026949908  
## WhiteRice -0.1077126098 0.0076178743 -0.191866240  
## Tomato1KG -0.1722555796 0.2082700070 -0.114498498  
## Banana1KG -0.0587169088 -0.2115909882 0.332263795  
## Onion1KG -0.0538325692 0.0660988359 -0.250106710  
## BeefRound1KG 0.1942767807 0.1885373741 0.006674530  
## ToyotaCorolla 0.0538981229 -0.1921550874 -0.125757955  
## PreschoolperMonth -0.0627651063 -0.0446650524 -0.251923625  
## PC28 PC29 PC30 PC31  
## GDP.USD..In\_Millions. 0.250097134 -0.015871419 -0.117484061 -0.151250877  
## MealInexpensive -0.079700689 -0.146646448 -0.208470167 -0.189747968  
## MealFor2 -0.045332958 0.018335983 -0.020063342 -0.155117565  
## McMealMcDonalds -0.344131296 -0.046166533 -0.030313337 -0.130381787  
## DomesticBeer 0.028641709 -0.104511614 0.026743239 0.008621031  
## ImportedBeer 0.165327477 -0.144654989 -0.077545533 0.056648335  
## CokeOrPepsi 0.162873020 0.091090554 0.046801265 0.114072143  
## Water1Litre -0.002073631 0.044095720 -0.071548462 0.094738400  
## Milk1Litre 0.061670613 -0.277067799 0.013741554 0.033425753  
## LoafofBread 0.110706508 -0.150204219 0.244017188 0.019998451  
## Eggs 0.184858901 -0.086711125 0.035051558 0.179851843  
## LocalCheese -0.082560929 0.103093576 0.178817447 0.090958606  
## Water2Litre 0.143880806 0.358531927 -0.207034321 0.040825932  
## BottleofWine -0.041747852 0.180350568 -0.033406295 -0.122305503  
## Domestic1LitreBeer -0.007249760 0.068770868 0.302659141 0.057730027  
## Imported1LitreBeer -0.011090710 -0.023505429 -0.175910125 0.167965647  
## Cigarettes20Pack 0.088160310 0.015950179 0.121341728 -0.089730784  
## OnewayTicket -0.117725992 -0.268924100 0.067351812 0.022744835  
## ChickenBreasts 0.093022875 0.252398654 -0.000717621 0.163804398  
## MonthlyPass 0.344609211 0.172702885 -0.107487707 0.145682172  
## Gasoline1Litre 0.091761109 -0.207557071 -0.179397616 -0.135042932  
## VWGolf -0.060297795 -0.046808109 0.084535061 -0.021831563  
## Apartment1BD -0.023246250 -0.060436253 -0.055798479 0.118314685  
## Apartment1BDOOC -0.146378324 -0.061298996 0.031436148 0.112175470  
## Apartment3BDICC 0.019546402 -0.135083763 -0.062011034 0.217408851  
## Apartment3BDOOC -0.123329851 -0.071177821 0.073244095 0.209645390  
## BasicUtilities 0.064756965 -0.051685083 0.071777433 -0.039261905  
## PrepaidMobile1MIn -0.085016486 0.057706295 -0.061575645 0.036941987  
## Internet -0.066409246 0.072340187 0.087601344 -0.285416830  
## GymFees 0.032732002 0.124441550 -0.021606592 -0.010214897  
## TennisCourtFeesPerHour 0.144450194 -0.018590938 0.074939802 -0.022801298  
## CinemaPerPerson -0.308501070 -0.055020649 -0.090182706 -0.010519901  
## PairofJeans -0.205777576 0.346066991 -0.187389599 0.152831944  
## SummerDress 0.029858750 -0.067807788 0.108240825 -0.132475074  
## NikeRunningShoes 0.073089404 -0.152796165 -0.237410383 -0.027129198  
## LeatherShoes 0.062371728 0.075543497 0.260654436 0.190284212  
## AptPricePerSquareM 0.072071900 0.092996880 -0.040934037 -0.274327501  
## AptPricePerSqMOOC -0.035540245 0.179912151 0.049131428 -0.214940477  
## AvgMnthlyNetSalary -0.014142373 -0.093453648 0.126107688 0.041990257  
## MortgageInterest -0.005189145 -0.014311643 -0.043047710 0.063512407  
## TaxiStartingFare 0.232082528 -0.002499394 0.365971350 -0.025314101  
## Taxi1KM 0.119760168 -0.011100633 -0.083217835 0.115127209  
## Taxi1HRWaiting -0.201466741 0.121532757 -0.045333542 -0.088670928  
## Apples1KG -0.109886600 -0.077998155 -0.182701395 0.228327500  
## Oranges1KG 0.100520187 -0.099787450 -0.300070215 0.099056734  
## Potato1KG -0.228977710 -0.085376849 0.231032559 0.045849849  
## Lettuce1Head 0.008322349 -0.191036358 -0.038480698 -0.185956056  
## CappucinoReg -0.215817969 0.062000212 -0.090417738 0.104994914  
## WhiteRice -0.060504353 0.282860389 0.120748940 -0.090433384  
## Tomato1KG -0.085406913 -0.026381090 -0.002081682 -0.005376534  
## Banana1KG -0.067232902 0.051763382 0.030638659 -0.110176656  
## Onion1KG 0.103900567 -0.052319370 -0.097129702 -0.207767006  
## BeefRound1KG 0.109573144 -0.037423865 -0.036737873 -0.058611593  
## ToyotaCorolla 0.075573860 0.072201796 -0.042929955 -0.001887878  
## PreschoolperMonth 0.107122058 0.054671516 -0.055900259 -0.320583414  
## PC32 PC33 PC34  
## GDP.USD..In\_Millions. 0.0225896413 0.028674817 0.012554901  
## MealInexpensive 0.2065400720 -0.015216240 0.077052846  
## MealFor2 0.0635154908 0.039053316 0.051665818  
## McMealMcDonalds -0.0656106866 0.142717589 -0.039049614  
## DomesticBeer 0.1946898067 0.221792851 -0.184812009  
## ImportedBeer 0.1874023676 -0.018180612 -0.224231906  
## CokeOrPepsi -0.1413565387 -0.044361887 0.091023799  
## Water1Litre -0.1874791874 0.072970535 0.075141459  
## Milk1Litre 0.0329776921 -0.003607301 0.092990747  
## LoafofBread 0.0992943218 0.017356151 -0.029882426  
## Eggs 0.1386655133 0.171382633 0.191449470  
## LocalCheese -0.0565123730 -0.025848931 0.035550438  
## Water2Litre 0.0024628221 -0.170108706 -0.056093980  
## BottleofWine 0.0274275126 -0.116099644 0.104400397  
## Domestic1LitreBeer -0.1918837323 0.113208648 -0.049562594  
## Imported1LitreBeer 0.1091452585 -0.107293885 0.230960628  
## Cigarettes20Pack -0.1258327556 -0.147902562 -0.263250875  
## OnewayTicket 0.1797672761 0.007984482 -0.126678936  
## ChickenBreasts -0.1854732137 -0.036563448 0.097047917  
## MonthlyPass 0.1112963013 0.117512991 0.128554667  
## Gasoline1Litre -0.3214827130 -0.177853980 -0.155357621  
## VWGolf -0.0028661855 0.095710728 -0.136928117  
## Apartment1BD -0.0887349838 0.001440576 0.056465597  
## Apartment1BDOOC 0.0358125095 -0.063139746 0.109065459  
## Apartment3BDICC -0.0533000050 -0.005330502 0.062431553  
## Apartment3BDOOC 0.0298235523 -0.091032111 0.107755276  
## BasicUtilities 0.1169530086 -0.260578754 0.130144157  
## PrepaidMobile1MIn -0.0534888457 -0.047011292 -0.037914482  
## Internet -0.0516716210 -0.026085363 0.003182875  
## GymFees -0.0114277803 0.021229502 -0.074848311  
## TennisCourtFeesPerHour -0.1385890585 -0.143718021 -0.037989662  
## CinemaPerPerson -0.1561089921 0.221420516 0.316873712  
## PairofJeans 0.2805461911 0.097393941 -0.268709307  
## SummerDress -0.0183201257 0.088706968 0.048390557  
## NikeRunningShoes -0.1398661171 -0.226139341 0.024901276  
## LeatherShoes -0.0128504034 0.177902697 -0.145444150  
## AptPricePerSquareM 0.0655256563 0.062485148 -0.013848948  
## AptPricePerSqMOOC 0.1237618792 0.001154271 -0.001816878  
## AvgMnthlyNetSalary -0.0247685404 -0.156742431 -0.130021507  
## MortgageInterest -0.0171095653 -0.054153332 -0.077036173  
## TaxiStartingFare -0.1011075325 -0.010589997 0.127034487  
## Taxi1KM 0.2279211286 0.007002746 -0.119087174  
## Taxi1HRWaiting 0.0779122589 0.002364075 0.066961461  
## Apples1KG 0.0996786803 -0.211968909 -0.075387199  
## Oranges1KG -0.3243150202 0.267791170 -0.132930852  
## Potato1KG 0.0369503392 -0.160125632 -0.195842036  
## Lettuce1Head 0.0761120755 -0.218730970 0.177771065  
## CappucinoReg -0.3295323309 -0.102726397 -0.220929811  
## WhiteRice 0.0760750695 -0.153432345 0.036352127  
## Tomato1KG -0.0008485376 0.118919320 0.171270262  
## Banana1KG -0.0171685759 -0.003797342 0.229690938  
## Onion1KG -0.0104664127 0.440787209 -0.094673672  
## BeefRound1KG 0.1542811200 -0.143539531 -0.176995990  
## ToyotaCorolla 0.0109046882 -0.069626444 0.185963852  
## PreschoolperMonth -0.1219490648 -0.046850387 -0.094157117  
## PC35 PC36 PC37  
## GDP.USD..In\_Millions. 0.135480147 0.027069333 -0.0620327126  
## MealInexpensive -0.123226287 -0.298572738 -0.0724867341  
## MealFor2 -0.171144738 0.067505083 -0.0001403681  
## McMealMcDonalds -0.120772182 -0.179202493 -0.3466212509  
## DomesticBeer 0.267216162 0.019330572 0.0882231285  
## ImportedBeer 0.056186121 0.088381905 0.0858916946  
## CokeOrPepsi -0.004702548 -0.084630383 0.1690441205  
## Water1Litre -0.046720806 -0.229067420 0.1488043554  
## Milk1Litre 0.171364149 -0.003904366 -0.1305180507  
## LoafofBread -0.231700300 0.143849316 -0.1309390169  
## Eggs -0.193186650 0.206026687 0.1300650041  
## LocalCheese 0.074108678 0.127770214 0.1727799059  
## Water2Litre 0.048935578 -0.156400403 0.2122434220  
## BottleofWine -0.047208132 -0.138626222 0.0678873032  
## Domestic1LitreBeer -0.169015869 -0.114883818 0.0496869008  
## Imported1LitreBeer -0.126917969 0.022282137 -0.1831451762  
## Cigarettes20Pack 0.121117806 0.262620117 -0.1025979527  
## OnewayTicket -0.128560568 0.145189305 0.2654538272  
## ChickenBreasts 0.188054733 0.062952173 -0.2655977789  
## MonthlyPass 0.108025103 -0.178986323 -0.2847481831  
## Gasoline1Litre 0.066751304 0.020643889 -0.0250203690  
## VWGolf 0.032336307 -0.295419382 -0.0915502925  
## Apartment1BD 0.042402293 0.025552387 -0.0309604096  
## Apartment1BDOOC 0.016225803 -0.028079923 -0.0170349919  
## Apartment3BDICC 0.109411852 -0.005078386 -0.0411096442  
## Apartment3BDOOC 0.021658352 -0.080121548 -0.0900968653  
## BasicUtilities 0.026707222 0.060255065 -0.1004449599  
## PrepaidMobile1MIn -0.046983014 0.001971845 0.0933135805  
## Internet -0.029270403 0.211591284 -0.0776575609  
## GymFees 0.049738136 0.050697414 0.1707823832  
## TennisCourtFeesPerHour 0.014443445 0.055797438 -0.0825189031  
## CinemaPerPerson 0.144009621 0.006654045 0.2243916040  
## PairofJeans 0.006471689 0.083499580 -0.0133013741  
## SummerDress 0.137653557 0.062430332 0.0910388689  
## NikeRunningShoes -0.107498891 0.032458909 0.0530582015  
## LeatherShoes -0.047965794 0.048565480 -0.1273252301  
## AptPricePerSquareM -0.262429642 -0.029056467 -0.0669285865  
## AptPricePerSqMOOC -0.119920806 -0.046105558 -0.0050472063  
## AvgMnthlyNetSalary -0.105927883 -0.061992513 0.0021283671  
## MortgageInterest -0.001923144 0.039397946 -0.0138199160  
## TaxiStartingFare 0.040437085 -0.269188288 0.1145754804  
## Taxi1KM -0.095590642 0.018144897 0.0541692044  
## Taxi1HRWaiting 0.272739241 0.283598640 -0.1910022568  
## Apples1KG 0.108949878 -0.072617585 0.1679313020  
## Oranges1KG -0.331913813 0.135892853 -0.2207007524  
## Potato1KG 0.112842187 -0.115833938 -0.1189079183  
## Lettuce1Head 0.124002778 0.016130895 -0.0455687969  
## CappucinoReg -0.004677245 0.052431630 0.0706520746  
## WhiteRice -0.135816365 0.081326367 -0.0503334287  
## Tomato1KG -0.201511167 0.043546755 0.1966545861  
## Banana1KG 0.160673067 0.050260193 -0.0478768732  
## Onion1KG 0.298031552 -0.008558889 0.0701076108  
## BeefRound1KG -0.028491564 -0.181916194 -0.0113396243  
## ToyotaCorolla -0.089825876 0.363182522 0.0721897300  
## PreschoolperMonth -0.001131797 -0.029547035 0.1944585670  
## PC38 PC39 PC40  
## GDP.USD..In\_Millions. -0.085255034 -0.025325357 -1.264155e-02  
## MealInexpensive -0.072408077 -0.093765034 2.036438e-02  
## MealFor2 -0.025661452 -0.263669701 -2.721030e-02  
## McMealMcDonalds 0.075912385 0.235603032 -3.299668e-02  
## DomesticBeer 0.079967949 0.030254588 -8.290504e-02  
## ImportedBeer -0.113728222 0.025085000 9.073948e-02  
## CokeOrPepsi -0.098158868 -0.143429581 1.473216e-02  
## Water1Litre -0.035647131 -0.103844778 1.006149e-01  
## Milk1Litre -0.366668236 0.052220454 8.014302e-02  
## LoafofBread 0.028821966 0.259319353 -2.489896e-02  
## Eggs 0.215390182 -0.228528440 8.883151e-06  
## LocalCheese 0.073433557 -0.015099812 1.063880e-01  
## Water2Litre -0.074502867 0.258195546 1.259903e-01  
## BottleofWine -0.069204515 -0.076394474 -3.229671e-02  
## Domestic1LitreBeer -0.061554789 0.091532905 -8.345908e-02  
## Imported1LitreBeer 0.080543239 0.083077738 1.174251e-01  
## Cigarettes20Pack -0.201715386 -0.274328136 -1.847462e-01  
## OnewayTicket 0.005677612 0.173311582 7.977532e-02  
## ChickenBreasts -0.170436504 0.190907071 -1.237086e-01  
## MonthlyPass 0.316171383 -0.080100903 1.134642e-01  
## Gasoline1Litre 0.083056753 -0.035693613 7.226296e-02  
## VWGolf -0.073812982 -0.090688031 1.711329e-02  
## Apartment1BD -0.134107941 0.011523487 -2.947437e-02  
## Apartment1BDOOC -0.131763854 0.004457995 5.645429e-02  
## Apartment3BDICC 0.045146471 -0.117478920 -8.696864e-02  
## Apartment3BDOOC -0.029484464 -0.091554930 1.161494e-02  
## BasicUtilities -0.042306553 0.199043003 -6.682493e-03  
## PrepaidMobile1MIn 0.003125291 0.061672355 -2.247538e-03  
## Internet -0.089405514 -0.058378428 -1.043212e-01  
## GymFees 0.083295741 -0.002958409 1.746508e-01  
## TennisCourtFeesPerHour -0.115505011 -0.052154237 -4.413024e-02  
## CinemaPerPerson -0.021869649 -0.086395235 -3.654366e-01  
## PairofJeans -0.215082810 -0.057271906 -1.490219e-01  
## SummerDress -0.023580572 -0.103281260 1.188818e-01  
## NikeRunningShoes 0.072425250 0.057056660 -7.093575e-03  
## LeatherShoes 0.273220212 0.183385513 -1.689288e-01  
## AptPricePerSquareM 0.023867261 -0.000402495 -1.185141e-01  
## AptPricePerSqMOOC 0.071187788 -0.002827545 3.026661e-02  
## AvgMnthlyNetSalary -0.103369361 0.217340076 -3.528427e-02  
## MortgageInterest -0.028770330 -0.080824916 -1.187043e-02  
## TaxiStartingFare -0.069366007 -0.050781260 3.747293e-02  
## Taxi1KM -0.136651905 -0.005571204 -7.592253e-02  
## Taxi1HRWaiting 0.055879232 0.002864199 4.499924e-01  
## Apples1KG 0.153776331 0.079519515 -2.966967e-01  
## Oranges1KG -0.083270598 -0.098079258 4.616265e-02  
## Potato1KG 0.169759599 -0.239790280 2.627189e-01  
## Lettuce1Head 0.293334089 -0.070774605 -2.103609e-01  
## CappucinoReg 0.219750856 -0.028412923 1.051222e-01  
## WhiteRice 0.049359846 -0.248784128 -9.470712e-02  
## Tomato1KG -0.226498036 0.042785767 3.545585e-01  
## Banana1KG -0.139874488 0.216734757 -9.080365e-02  
## Onion1KG 0.028532056 0.079039995 -6.188442e-03  
## BeefRound1KG -0.094660939 -0.142994080 -5.337767e-02  
## ToyotaCorolla 0.039663225 0.056273199 -4.096003e-02  
## PreschoolperMonth 0.208359629 0.241598478 1.832400e-02  
## PC41 PC42 PC43  
## GDP.USD..In\_Millions. -0.061800750 -0.199510613 0.1927679243  
## MealInexpensive -0.265421106 -0.109214574 -0.1795417758  
## MealFor2 0.032709823 0.409152236 0.0975432381  
## McMealMcDonalds 0.112113643 -0.160610335 0.0395311246  
## DomesticBeer 0.145897704 0.037643130 -0.0117253356  
## ImportedBeer 0.100672892 0.189012087 0.2377718087  
## CokeOrPepsi 0.222071747 0.027739362 0.0283933321  
## Water1Litre 0.069533107 -0.061952084 -0.1232633213  
## Milk1Litre 0.031442705 0.007772540 -0.0249838567  
## LoafofBread 0.170496904 0.349328201 -0.2161003369  
## Eggs -0.237913652 -0.203515479 0.0452720492  
## LocalCheese 0.068231606 0.025580684 -0.0854797865  
## Water2Litre -0.301569172 0.034388319 0.0265390309  
## BottleofWine -0.017511019 -0.018827330 0.0356278305  
## Domestic1LitreBeer -0.195747141 0.021488510 -0.0958529562  
## Imported1LitreBeer 0.066812657 -0.056963822 -0.0120071711  
## Cigarettes20Pack -0.090823878 -0.095178379 -0.1174440993  
## OnewayTicket -0.004784527 -0.295461888 -0.0244498782  
## ChickenBreasts 0.077797886 -0.079193047 0.1815082032  
## MonthlyPass 0.207595071 0.084026072 0.0318396291  
## Gasoline1Litre 0.026448038 0.015242879 0.0140353714  
## VWGolf -0.036330671 0.063950049 -0.0807665214  
## Apartment1BD 0.063498012 0.024820084 -0.2311452142  
## Apartment1BDOOC 0.140124078 -0.050705617 -0.0122083986  
## Apartment3BDICC -0.114051033 0.021673916 -0.1640311261  
## Apartment3BDOOC 0.019658818 -0.083573358 0.0182409726  
## BasicUtilities -0.133734298 0.131717511 -0.0804289170  
## PrepaidMobile1MIn 0.034283202 -0.003137879 0.0160944432  
## Internet 0.081651950 0.035740340 0.0224197073  
## GymFees -0.011119126 0.002080422 -0.0050854177  
## TennisCourtFeesPerHour -0.162808849 -0.149293163 0.0184796229  
## CinemaPerPerson -0.175928963 0.277235014 0.2495026498  
## PairofJeans 0.142156675 -0.040520000 0.0814443788  
## SummerDress 0.088500184 -0.017932172 -0.0662986728  
## NikeRunningShoes 0.019668556 -0.065279662 0.0300192380  
## LeatherShoes -0.206191007 -0.001377635 0.0428020009  
## AptPricePerSquareM -0.020160808 -0.033897736 -0.1168067604  
## AptPricePerSqMOOC -0.087986397 -0.099760091 0.2255397429  
## AvgMnthlyNetSalary -0.137247785 -0.120312525 0.2588498171  
## MortgageInterest -0.027517147 0.034196506 -0.0005309891  
## TaxiStartingFare -0.043586367 -0.023214792 -0.0048531157  
## Taxi1KM 0.096238883 -0.053279395 -0.0007225412  
## Taxi1HRWaiting -0.371111282 0.176228810 -0.2133408516  
## Apples1KG -0.109526472 0.110260733 -0.1721030060  
## Oranges1KG -0.112233230 0.098638695 0.1042871181  
## Potato1KG -0.040343024 0.017179703 0.4266270232  
## Lettuce1Head 0.163198617 -0.131618718 0.1031521827  
## CappucinoReg 0.195863808 -0.105836100 -0.1707001565  
## WhiteRice 0.135115100 -0.183235386 -0.2607409876  
## Tomato1KG 0.179696192 -0.026310165 0.0684871137  
## Banana1KG 0.126527752 -0.039319101 -0.0213553274  
## Onion1KG -0.017407926 -0.249312647 -0.1478669002  
## BeefRound1KG -0.024186383 0.178338446 -0.1094814194  
## ToyotaCorolla -0.024086501 -0.091644879 0.1100088111  
## PreschoolperMonth 0.120639193 0.212559127 0.0307911262  
## PC44 PC45 PC46  
## GDP.USD..In\_Millions. 0.0586602280 0.1586329472 0.045141508  
## MealInexpensive -0.4631160661 -0.0099209375 -0.100938125  
## MealFor2 0.4103318830 0.0522244206 0.012422192  
## McMealMcDonalds 0.1770154589 0.1938393810 -0.056659196  
## DomesticBeer 0.1881040565 -0.1970192796 -0.035574783  
## ImportedBeer -0.2353820722 0.0430727527 0.064761886  
## CokeOrPepsi 0.0461640314 -0.0382421158 -0.136662825  
## Water1Litre 0.0802284007 -0.0002702018 0.189349465  
## Milk1Litre 0.1347773412 0.0872778280 0.054039956  
## LoafofBread -0.2215800423 -0.0898214959 -0.093705334  
## Eggs 0.0202537899 -0.1243642099 0.087910979  
## LocalCheese -0.1275143743 0.0207131174 -0.048120810  
## Water2Litre 0.1879463143 0.0170049608 -0.135989911  
## BottleofWine -0.0900571828 -0.0737083777 0.009317453  
## Domestic1LitreBeer -0.0472019460 0.3162064308 -0.014177017  
## Imported1LitreBeer 0.1719093267 -0.1953191776 -0.019250265  
## Cigarettes20Pack -0.0862905003 0.0112457673 0.052714070  
## OnewayTicket 0.1395272374 -0.0957277782 -0.169380245  
## ChickenBreasts -0.1520312756 -0.1466159114 -0.118364424  
## MonthlyPass -0.1459916626 0.1906401638 0.060116304  
## Gasoline1Litre -0.1131899314 0.0521570499 0.081022157  
## VWGolf -0.0359067245 -0.2815947478 0.034607583  
## Apartment1BD 0.0812070539 0.0686520276 -0.110561090  
## Apartment1BDOOC 0.0461765995 0.0283146504 0.408918013  
## Apartment3BDICC 0.1065148932 0.0979243692 -0.502433252  
## Apartment3BDOOC 0.0567336283 -0.0730053647 0.206611285  
## BasicUtilities 0.0704783340 -0.0060533281 -0.064306643  
## PrepaidMobile1MIn 0.0885595280 0.0285020268 0.020902680  
## Internet -0.0590341122 0.0134984445 0.181501986  
## GymFees -0.0946099630 0.0128298637 0.025037618  
## TennisCourtFeesPerHour 0.0329025025 -0.0436944619 0.005774773  
## CinemaPerPerson -0.1708906518 0.0440051900 -0.081680626  
## PairofJeans -0.0446255452 -0.0256593994 -0.036031427  
## SummerDress -0.0377810770 -0.0727685949 -0.021603793  
## NikeRunningShoes -0.0182269304 -0.0011265654 -0.023531699  
## LeatherShoes -0.0119586688 0.1676028762 0.179164251  
## AptPricePerSquareM -0.0553641454 0.0057475484 -0.117644143  
## AptPricePerSqMOOC 0.0202742438 -0.0917861142 0.150797760  
## AvgMnthlyNetSalary 0.0383099191 -0.0562440666 0.084444795  
## MortgageInterest -0.0001143328 0.0351617367 0.034710612  
## TaxiStartingFare 0.0324508961 -0.1865848940 0.050227179  
## Taxi1KM -0.1785687380 0.0399376496 -0.078631532  
## Taxi1HRWaiting -0.0136242031 -0.0401646974 0.114238791  
## Apples1KG -0.0399049972 -0.0793365128 0.305534831  
## Oranges1KG 0.0692682554 -0.2928196618 0.027207589  
## Potato1KG -0.0309849903 -0.0006148461 -0.303210007  
## Lettuce1Head -0.0045225682 0.0700326407 0.024415580  
## CappucinoReg -0.1019849522 0.0968172482 0.002658085  
## WhiteRice 0.0834331336 -0.1257882295 -0.093635262  
## Tomato1KG -0.1552970283 0.2472576181 0.041122696  
## Banana1KG -0.0044505724 -0.1247094269 -0.051807438  
## Onion1KG 0.0934718692 0.0695863771 0.012146358  
## BeefRound1KG 0.2383911233 0.3745633118 0.057236971  
## ToyotaCorolla 0.0275107162 0.2730550442 -0.048014126  
## PreschoolperMonth 0.0494910945 -0.1969502382 -0.025736313  
## PC47 PC48 PC49  
## GDP.USD..In\_Millions. -0.138818006 -0.075234533 -0.0063335359  
## MealInexpensive 0.118244644 -0.097167631 0.1684418377  
## MealFor2 -0.037916249 0.211424193 0.5348994147  
## McMealMcDonalds -0.096376106 0.026491025 -0.1088833892  
## DomesticBeer -0.031018732 -0.347727737 -0.2294722299  
## ImportedBeer 0.077089539 0.354940179 -0.0724250242  
## CokeOrPepsi -0.308653749 -0.254533633 0.1241346906  
## Water1Litre 0.255140718 0.253159162 -0.3162683607  
## Milk1Litre -0.073763242 0.058688309 -0.0833335393  
## LoafofBread 0.187063015 -0.060760345 0.0007443133  
## Eggs -0.209756728 0.100882555 -0.0510463181  
## LocalCheese 0.134684748 0.120733268 0.0199265124  
## Water2Litre 0.066098975 -0.133605695 -0.0320152728  
## BottleofWine -0.012523772 -0.024669118 -0.0365352886  
## Domestic1LitreBeer -0.210125751 0.198778340 -0.0579018172  
## Imported1LitreBeer 0.170408358 -0.119091238 0.1371828612  
## Cigarettes20Pack 0.125914131 -0.160899159 0.1293532244  
## OnewayTicket 0.028390646 -0.071062496 0.1067589581  
## ChickenBreasts -0.098849693 -0.011972875 0.2076213842  
## MonthlyPass 0.020947755 0.049711107 0.0162218822  
## Gasoline1Litre -0.022815526 0.011618977 0.0624558718  
## VWGolf -0.162119724 -0.023459373 0.0912452728  
## Apartment1BD -0.049466642 0.145699594 -0.0578335154  
## Apartment1BDOOC 0.005447452 -0.077587094 0.0092218296  
## Apartment3BDICC -0.058214861 0.116020640 -0.1309975737  
## Apartment3BDOOC 0.099513016 -0.167826796 -0.0006490284  
## BasicUtilities 0.022680766 0.003838473 -0.0121734486  
## PrepaidMobile1MIn -0.010541586 -0.018367834 -0.0181290172  
## Internet -0.094896406 -0.090960844 -0.2335573716  
## GymFees 0.064915901 -0.086703639 0.0183717789  
## TennisCourtFeesPerHour -0.012807362 0.019899950 -0.0446515191  
## CinemaPerPerson 0.198375899 -0.129840149 -0.0742299742  
## PairofJeans -0.072490104 0.167580156 -0.1181484354  
## SummerDress -0.054725355 -0.003448452 -0.0014318569  
## NikeRunningShoes 0.057393983 0.032815206 -0.0168949770  
## LeatherShoes 0.054185672 -0.186852562 0.0847125440  
## AptPricePerSquareM -0.297563296 -0.078003755 -0.0480487272  
## AptPricePerSqMOOC 0.165300073 0.006732249 0.0378594798  
## AvgMnthlyNetSalary 0.018066358 0.242736375 0.0565998821  
## MortgageInterest -0.012534575 -0.010555682 0.0012223455  
## TaxiStartingFare 0.071884564 0.027532821 -0.0416173084  
## Taxi1KM -0.009559364 -0.002563600 -0.0153495146  
## Taxi1HRWaiting -0.181127580 0.046755713 -0.1185409528  
## Apples1KG -0.316186842 0.064121580 0.1202526467  
## Oranges1KG 0.076160328 -0.066145552 -0.1753594227  
## Potato1KG 0.005074262 -0.019241975 -0.0367932684  
## Lettuce1Head -0.120384184 0.107907265 -0.1338463948  
## CappucinoReg 0.039679812 -0.084779985 0.1960042894  
## WhiteRice 0.137998538 0.165914221 -0.0992010284  
## Tomato1KG -0.216534799 -0.179666489 0.0539235407  
## Banana1KG 0.103015555 0.073263214 0.0842881726  
## Onion1KG 0.194211989 0.167971460 0.3075609272  
## BeefRound1KG 0.217479975 -0.248332689 -0.1173622833  
## ToyotaCorolla 0.148511382 -0.073621784 -0.0485394941  
## PreschoolperMonth -0.106209300 0.052919183 -0.1440452005  
## PC50 PC51 PC52  
## GDP.USD..In\_Millions. -0.010809757 -0.2181049514 0.218100902  
## MealInexpensive -0.092448404 -0.0367327755 0.077590056  
## MealFor2 -0.087228782 -0.2062847206 0.033146463  
## McMealMcDonalds 0.082647148 0.0934064991 -0.043961519  
## DomesticBeer -0.353147361 -0.2422701786 -0.044336511  
## ImportedBeer 0.400337418 0.2084656756 -0.055912816  
## CokeOrPepsi -0.013127771 0.4388277077 0.022885170  
## Water1Litre 0.093235018 -0.3898415555 -0.024605949  
## Milk1Litre -0.040475077 0.0287519033 0.045023111  
## LoafofBread -0.167135512 -0.0914354787 0.121451115  
## Eggs 0.030731673 0.0084562952 -0.043456241  
## LocalCheese -0.170045347 0.0563324025 -0.040954257  
## Water2Litre 0.016173327 0.0982154324 0.011593079  
## BottleofWine -0.019611566 -0.0375959076 -0.077786927  
## Domestic1LitreBeer -0.183157481 -0.0124802634 0.351639666  
## Imported1LitreBeer 0.110904362 0.0176142315 -0.160923324  
## Cigarettes20Pack 0.077520379 -0.0731187496 -0.098427084  
## OnewayTicket 0.212918030 0.0071971963 0.183075681  
## ChickenBreasts 0.129467578 -0.2649077922 0.112860652  
## MonthlyPass -0.124041412 0.0700610106 -0.068858799  
## Gasoline1Litre -0.084000499 -0.0775070619 -0.043546392  
## VWGolf 0.189803560 -0.0330418367 -0.053802058  
## Apartment1BD 0.060212220 0.0662552934 0.134650159  
## Apartment1BDOOC -0.042973338 0.2747018570 0.223803927  
## Apartment3BDICC 0.156455938 -0.1334085367 -0.237593182  
## Apartment3BDOOC -0.039221408 -0.0010394229 0.035545668  
## BasicUtilities 0.016261823 0.0150656850 0.073246096  
## PrepaidMobile1MIn -0.013295441 -0.0912988599 0.029690761  
## Internet 0.118757254 -0.0063710750 -0.209550594  
## GymFees -0.096702302 -0.0566735609 0.067640958  
## TennisCourtFeesPerHour -0.026539221 0.0156203390 0.015402904  
## CinemaPerPerson 0.018330544 0.1559484781 -0.032513560  
## PairofJeans -0.145866104 0.0005048341 0.054848014  
## SummerDress 0.044840079 0.0345402569 -0.032280322  
## NikeRunningShoes -0.152929565 0.0127254092 0.063922679  
## LeatherShoes 0.292027785 -0.0136879227 -0.129231475  
## AptPricePerSquareM -0.024181382 0.0625764440 -0.151715548  
## AptPricePerSqMOOC 0.115023002 -0.0820789321 0.183322310  
## AvgMnthlyNetSalary -0.421322474 0.1190476089 -0.534619227  
## MortgageInterest -0.002076435 -0.0136533314 -0.008040673  
## TaxiStartingFare 0.004568935 -0.0053220489 -0.009568541  
## Taxi1KM -0.051218582 -0.0164367873 0.063813946  
## Taxi1HRWaiting -0.045821272 0.0812869828 -0.009039834  
## Apples1KG 0.028940105 -0.1421613699 0.017110415  
## Oranges1KG -0.064874314 0.1222735689 0.150942685  
## Potato1KG -0.037721569 -0.0340718354 0.159253610  
## Lettuce1Head -0.025868745 0.0175203271 0.111629486  
## CappucinoReg 0.017807542 0.0160843532 -0.020433457  
## WhiteRice 0.030424816 0.1161343491 0.001057742  
## Tomato1KG 0.094083221 -0.2818461835 -0.263027802  
## Banana1KG 0.045351590 -0.0306011100 -0.016719874  
## Onion1KG -0.070783089 0.1882049990 -0.036049782  
## BeefRound1KG 0.107261849 0.0800257154 -0.059928355  
## ToyotaCorolla -0.092957280 -0.0351771572 0.052803488  
## PreschoolperMonth 0.147134706 0.0162648691 0.059991321  
## PC53 PC54 PC55  
## GDP.USD..In\_Millions. 0.008864978 0.011738962 0.0184881387  
## MealInexpensive -0.012146005 -0.054447723 0.0120118681  
## MealFor2 0.055073548 0.051186597 0.0207494609  
## McMealMcDonalds -0.089052773 0.005897884 -0.0137695462  
## DomesticBeer 0.020537769 -0.112381846 0.0040780142  
## ImportedBeer 0.062735148 0.121632827 -0.0409363427  
## CokeOrPepsi -0.186165654 -0.029824818 -0.0309524639  
## Water1Litre 0.219201142 0.033250553 0.0487488232  
## Milk1Litre -0.067785320 0.039236574 -0.0026235664  
## LoafofBread -0.078043345 0.003661670 0.0499412008  
## Eggs 0.020333369 -0.062347616 -0.0282154500  
## LocalCheese 0.033306773 0.011042551 0.0138077431  
## Water2Litre 0.044318541 0.054907877 0.0035602599  
## BottleofWine 0.029947819 -0.068022634 -0.0131235570  
## Domestic1LitreBeer -0.114347946 0.125851791 0.0198382706  
## Imported1LitreBeer 0.074796075 -0.080421097 0.0034963223  
## Cigarettes20Pack 0.015032435 -0.015914451 0.0212951418  
## OnewayTicket 0.047420277 0.034984921 -0.0030774078  
## ChickenBreasts 0.102176430 0.007981770 0.0481629906  
## MonthlyPass -0.037502300 -0.030904713 -0.0213954197  
## Gasoline1Litre -0.036746449 -0.018915943 -0.0046280452  
## VWGolf -0.077317051 -0.013975978 0.0196765434  
## Apartment1BD 0.149667561 -0.547720363 -0.5607919754  
## Apartment1BDOOC 0.231318678 -0.136984582 0.5773171954  
## Apartment3BDICC -0.282516274 0.076642914 0.3965569582  
## Apartment3BDOOC -0.116635452 0.653989883 -0.4167330178  
## BasicUtilities 0.042458916 0.030311455 0.0010697432  
## PrepaidMobile1MIn 0.035079295 0.007995982 0.0060959214  
## Internet -0.066389014 -0.050655946 -0.0199528026  
## GymFees 0.006013105 -0.011895308 0.0063626943  
## TennisCourtFeesPerHour 0.013956440 0.005954087 0.0140483664  
## CinemaPerPerson 0.045940602 -0.009164214 -0.0302300533  
## PairofJeans -0.053056951 0.054812877 0.0054003434  
## SummerDress -0.017493773 0.006229144 -0.0033894777  
## NikeRunningShoes -0.004398862 0.019709762 0.0077491983  
## LeatherShoes 0.099819011 -0.081297417 -0.0165022234  
## AptPricePerSquareM 0.531387042 0.190428334 0.0057990983  
## AptPricePerSqMOOC -0.502659666 -0.259725717 0.0026271547  
## AvgMnthlyNetSalary -0.057084941 -0.114259720 -0.0273158013  
## MortgageInterest 0.015905649 -0.010563081 -0.0036225010  
## TaxiStartingFare 0.034232414 -0.034584992 0.0094596207  
## Taxi1KM -0.040223626 0.036959754 0.0125475626  
## Taxi1HRWaiting -0.047893727 0.037840591 -0.0107960840  
## Apples1KG -0.047076274 -0.056617958 -0.0102280732  
## Oranges1KG -0.058219859 0.012688285 0.0299985558  
## Potato1KG 0.277144557 -0.071239990 -0.0203197931  
## Lettuce1Head -0.065593192 0.027747693 -0.0208215386  
## CappucinoReg -0.034003185 0.014026882 0.0138074458  
## WhiteRice -0.058400779 0.024976423 0.0171203171  
## Tomato1KG -0.115328312 -0.035478750 -0.0293629829  
## Banana1KG 0.027907601 0.041764743 0.0198491705  
## Onion1KG 0.024560270 0.097632964 -0.0093545757  
## BeefRound1KG -0.023497124 -0.041027374 -0.0235161134  
## ToyotaCorolla 0.039542944 0.024939080 -0.0087302248  
## PreschoolperMonth -0.049255705 0.119666570 0.0008694649

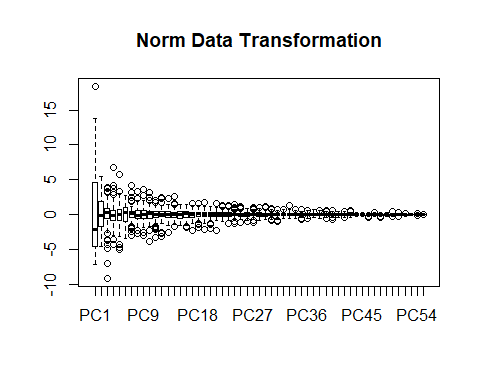
head(GDPdataTrainSet.pca.normdata$x) # Transformed data

## PC1 PC2 PC3 PC4 PC5 PC6  
## 152 -4.538180 0.6639887 -0.6316056 -0.14722593 -0.9450744 -2.3418027  
## 36 6.008906 4.7538854 -0.4766750 1.21588467 1.0385989 -0.3510344  
## 149 -2.345675 -4.5901096 -2.3006785 0.54581112 -0.8800930 0.8904711  
## 28 5.112136 4.0324832 0.9521857 0.60597799 0.8886100 0.7743963  
## 98 -2.288201 -0.1400699 1.2980152 0.03851229 -0.4015706 0.3123823  
## 69 -3.620999 2.0528032 0.5367553 -0.91017486 0.9006747 0.4132840  
## PC7 PC8 PC9 PC10 PC11 PC12  
## 152 0.1695368 0.6221732 0.9421581 -0.1259869 0.1889781 0.02476313  
## 36 -1.4453523 -0.4128481 0.1250789 -0.3014330 -0.3911416 0.15531010  
## 149 -1.1147972 0.4214035 0.6010898 0.4849352 0.8659955 1.10282920  
## 28 -1.7726632 -0.3432469 -0.4835354 -0.7432984 -0.4557761 0.53282352  
## 98 0.1171134 -1.6162267 -0.3540838 0.6707731 0.3072641 -0.33700403  
## 69 0.1712317 0.5438030 0.4884094 0.2921587 0.3871923 0.25835527  
## PC13 PC14 PC15 PC16 PC17 PC18  
## 152 0.5071221 0.04557351 -0.1218260 0.3535135 -0.01245006 0.3667118  
## 36 0.2009968 0.02331626 -1.2559075 0.2425995 -0.63519224 0.3851427  
## 149 0.5893008 0.65922670 0.3742250 -0.6498944 -2.36213461 -0.8763751  
## 28 0.4692038 -0.63720147 -1.1192796 -0.7971793 -0.10103257 0.3246495  
## 98 0.1026396 -0.39838692 0.4860151 -0.8983990 0.08056997 -0.4630154  
## 69 -0.1566386 0.26205546 0.1300133 0.1643646 -0.40780704 0.2350261  
## PC19 PC20 PC21 PC22 PC23 PC24  
## 152 0.35184244 0.2072473 0.1132149 0.01185565 0.3930654 -0.18672159  
## 36 -0.15563965 1.1066840 0.2829549 0.52470347 0.2749430 0.43090768  
## 149 -1.28928731 -0.4165359 -2.3366398 0.47091895 -0.2147498 0.78530651  
## 28 -1.21850515 0.9308704 0.6712895 0.24579763 -0.6206307 0.16768249  
## 98 -0.60996257 0.4307663 1.0718846 -0.13163069 0.8623523 0.06331386  
## 69 -0.06575658 0.4305440 -0.2488592 0.29348256 0.1942333 0.10948949  
## PC25 PC26 PC27 PC28 PC29  
## 152 0.03990196 -0.01506592 0.02740379 -0.1146786 0.31763743  
## 36 -0.30657089 -0.71763553 -0.45559221 0.3030734 0.33631954  
## 149 -0.17921947 -1.03239923 0.10996129 -0.1888749 0.19348633  
## 28 -0.10051406 -0.27133415 -0.04563679 -0.5881882 -0.48334681  
## 98 0.85239672 -0.36140164 0.34805499 0.1450126 -0.20496913  
## 69 0.17741272 0.66552573 -0.02552008 -0.2368261 -0.08988199  
## PC30 PC31 PC32 PC33 PC34  
## 152 0.098641113 0.18771253 -0.02928531 -0.11535699 0.06186209  
## 36 -0.375639380 -0.36219492 0.30662732 -0.32595778 -0.04490677  
## 149 -0.043555089 -0.01492040 0.29212132 0.31538174 0.27792425  
## 28 -0.351321975 -0.06186613 0.65389138 -0.03343553 -0.35799558  
## 98 -0.134084837 -0.13900489 0.28896586 0.03962362 0.15576254  
## 69 -0.001847775 0.13215580 0.34441078 0.34008086 -0.39221425  
## PC35 PC36 PC37 PC38 PC39  
## 152 0.02631849 -0.04421183 0.29253188 -0.55291586 -0.01211397  
## 36 0.36897247 0.16092749 0.36773495 0.20080132 0.01854035  
## 149 0.07342413 -0.17844847 0.12894208 0.18217758 0.24046470  
## 28 0.02347315 -0.06678005 0.48824702 -0.10973631 0.22665493  
## 98 -0.16935403 0.27529790 0.19875025 0.15581006 -0.13113319  
## 69 -0.06373090 0.05643610 -0.04609942 0.02516095 -0.11827461  
## PC40 PC41 PC42 PC43 PC44  
## 152 0.20817642 -0.007982577 -0.03574241 -0.17973196 -0.170031036  
## 36 -0.02422453 0.483558099 0.37862578 0.02404021 0.038891848  
## 149 -0.23453139 -0.274159511 -0.19731061 -0.10350053 0.097737520  
## 28 -0.05332729 0.018439698 -0.28581401 -0.04696913 0.006887978  
## 98 0.19614100 -0.192225884 -0.25582507 0.14993350 -0.090326937  
## 69 -0.07055334 -0.009831447 -0.07979645 0.07330280 -0.219334889  
## PC45 PC46 PC47 PC48 PC49  
## 152 -0.10310372 0.05435330 -0.105675495 0.09023351 0.010976379  
## 36 0.29313261 -0.12030156 0.171819217 0.27308094 -0.057395932  
## 149 -0.14766995 0.09506855 -0.018503233 0.04476916 0.056157073  
## 28 -0.03040859 -0.27130160 -0.088094886 -0.34945683 0.132713662  
## 98 -0.05547517 0.16263442 -0.003182785 -0.05435657 -0.001976272  
## 69 0.08764848 0.01697415 -0.091551464 0.09252851 -0.063803679  
## PC50 PC51 PC52 PC53 PC54  
## 152 0.10127307 -0.06394036 0.01561135 -0.09046270 0.08542559  
## 36 0.02711672 -0.04104242 -0.05448020 -0.07812584 0.05087659  
## 149 -0.02183855 -0.03058559 -0.03136165 0.03640684 0.04478884  
## 28 -0.04459345 -0.07793941 0.11466818 0.06580176 0.01606008  
## 98 -0.07368355 0.08957282 -0.06757826 -0.02710274 0.10400734  
## 69 -0.08439080 0.07599266 -0.01929276 -0.06038617 0.02293701  
## PC55  
## 152 0.040462456  
## 36 -0.057078616  
## 149 0.003883289  
## 28 0.036875423  
## 98 -0.026374756  
## 69 -0.032943883

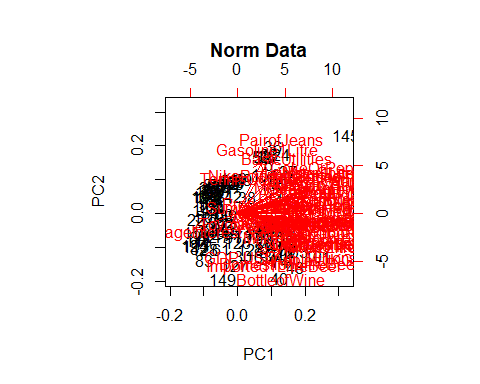
summary(GDPdataTrainSet.pca.normdata)

## Importance of components:  
## PC1 PC2 PC3 PC4 PC5 PC6  
## Standard deviation 5.409 2.23626 1.97001 1.57941 1.40794 1.35881  
## Proportion of Variance 0.532 0.09092 0.07056 0.04536 0.03604 0.03357  
## Cumulative Proportion 0.532 0.62294 0.69350 0.73886 0.77490 0.80847  
## PC7 PC8 PC9 PC10 PC11 PC12  
## Standard deviation 1.06089 0.97374 0.95863 0.90260 0.85578 0.7815  
## Proportion of Variance 0.02046 0.01724 0.01671 0.01481 0.01332 0.0111  
## Cumulative Proportion 0.82893 0.84617 0.86288 0.87769 0.89101 0.9021  
## PC13 PC14 PC15 PC16 PC17 PC18  
## Standard deviation 0.72685 0.67910 0.65357 0.62734 0.59023 0.56876  
## Proportion of Variance 0.00961 0.00839 0.00777 0.00716 0.00633 0.00588  
## Cumulative Proportion 0.91172 0.92010 0.92787 0.93503 0.94136 0.94724  
## PC19 PC20 PC21 PC22 PC23 PC24  
## Standard deviation 0.5397 0.51707 0.48519 0.45582 0.43708 0.39278  
## Proportion of Variance 0.0053 0.00486 0.00428 0.00378 0.00347 0.00281  
## Cumulative Proportion 0.9525 0.95740 0.96168 0.96546 0.96893 0.97173  
## PC25 PC26 PC27 PC28 PC29 PC30  
## Standard deviation 0.38179 0.37136 0.35464 0.33012 0.32729 0.31241  
## Proportion of Variance 0.00265 0.00251 0.00229 0.00198 0.00195 0.00177  
## Cumulative Proportion 0.97438 0.97689 0.97918 0.98116 0.98311 0.98488  
## PC31 PC32 PC33 PC34 PC35 PC36  
## Standard deviation 0.29552 0.28957 0.27605 0.25827 0.25184 0.23944  
## Proportion of Variance 0.00159 0.00152 0.00139 0.00121 0.00115 0.00104  
## Cumulative Proportion 0.98647 0.98800 0.98938 0.99059 0.99175 0.99279  
## PC37 PC38 PC39 PC40 PC41 PC42  
## Standard deviation 0.22738 0.21737 0.20522 0.19016 0.18684 0.17250  
## Proportion of Variance 0.00094 0.00086 0.00077 0.00066 0.00063 0.00054  
## Cumulative Proportion 0.99373 0.99459 0.99535 0.99601 0.99665 0.99719  
## PC43 PC44 PC45 PC46 PC47 PC48  
## Standard deviation 0.16046 0.14633 0.14134 0.1289 0.12017 0.11395  
## Proportion of Variance 0.00047 0.00039 0.00036 0.0003 0.00026 0.00024  
## Cumulative Proportion 0.99766 0.99804 0.99841 0.9987 0.99897 0.99921  
## PC49 PC50 PC51 PC52 PC53 PC54  
## Standard deviation 0.11054 0.10141 0.08816 0.07351 0.06542 0.05373  
## Proportion of Variance 0.00022 0.00019 0.00014 0.00010 0.00008 0.00005  
## Cumulative Proportion 0.99943 0.99962 0.99976 0.99986 0.99994 0.99999  
## PC55  
## Standard deviation 0.02620  
## Proportion of Variance 0.00001  
## Cumulative Proportion 1.00000

# We obtained 55 principle component   
#The first 19 components account for >95% of total variance in the data  
  
# Biplot the first two PCs.   
  
boxplot(GDPdataTrainSet.pca.normdata$x, main='Norm Data Transformation')



#Visualize first two components of your PCA.   
  
biplot(GDPdataTrainSet.pca.normdata, choices = 1:2, main='Norm Data')



#correlations of the PCs  
  
cor(GDPdataTrainSet.pca.normdata$x)

## PC1 PC2 PC3 PC4 PC5  
## PC1 1.000000e+00 1.392486e-14 3.283549e-16 1.831639e-16 -6.043303e-16  
## PC2 1.392486e-14 1.000000e+00 7.941827e-16 -3.705984e-16 -8.962690e-17  
## PC3 3.283549e-16 7.941827e-16 1.000000e+00 -4.909977e-16 -1.615978e-16  
## PC4 1.831639e-16 -3.705984e-16 -4.909977e-16 1.000000e+00 5.219113e-17  
## PC5 -6.043303e-16 -8.962690e-17 -1.615978e-16 5.219113e-17 1.000000e+00  
## PC6 -3.502613e-17 -7.326505e-17 1.115412e-16 6.022567e-16 1.022356e-15  
## PC7 9.858091e-16 2.487586e-16 -5.924119e-17 2.180510e-16 6.016331e-16  
## PC8 4.180716e-16 3.261906e-16 1.660156e-16 6.166770e-17 -2.850326e-16  
## PC9 -2.827011e-17 8.671819e-18 -1.636844e-16 1.604136e-18 1.084636e-16  
## PC10 6.820950e-17 -2.124900e-16 2.822535e-16 8.362641e-16 2.767867e-16  
## PC11 7.510682e-16 -7.547618e-17 -6.085866e-16 2.456381e-16 -2.077860e-16  
## PC12 5.248245e-16 1.679478e-16 6.660054e-16 -2.534642e-16 4.571608e-17  
## PC13 5.087215e-16 -1.416033e-16 -2.722058e-16 -4.891191e-16 1.989088e-16  
## PC14 3.053652e-16 3.126751e-16 -7.720143e-17 3.091189e-16 5.514429e-16  
## PC15 1.631366e-16 -5.597159e-16 -7.120952e-16 4.812628e-16 5.511102e-16  
## PC16 -9.673811e-16 3.342477e-16 -2.495948e-16 -1.168007e-16 2.209989e-17  
## PC17 -5.460246e-16 5.178218e-18 -9.347479e-16 -1.110404e-16 3.654529e-16  
## PC18 1.297492e-15 2.441497e-16 -4.038701e-16 -6.365918e-16 -4.105967e-17  
## PC19 1.177996e-15 -4.846150e-16 -2.889679e-16 -2.871159e-17 2.476113e-16  
## PC20 4.843865e-16 -5.142729e-16 -5.281188e-16 -3.569727e-16 -2.493655e-16  
## PC21 2.241791e-15 -4.545787e-16 6.760796e-16 3.587896e-16 2.691988e-16  
## PC22 1.515027e-15 -2.157157e-16 -3.172644e-16 3.435707e-16 3.000010e-16  
## PC23 -3.843859e-16 -1.031765e-15 1.183090e-16 4.451363e-17 5.520069e-17  
## PC24 -9.208127e-16 -6.089802e-16 -1.189912e-15 -6.892753e-16 -8.848295e-18  
## PC25 -2.350675e-15 -1.382741e-15 7.103798e-17 -6.984601e-17 6.351014e-16  
## PC26 3.215976e-15 -1.076600e-15 -4.216003e-16 -3.913651e-16 5.718469e-16  
## PC27 3.050423e-15 1.541720e-15 -6.065348e-16 9.547810e-16 3.081804e-17  
## PC28 -6.426220e-16 -1.002721e-15 -5.299986e-16 -1.766537e-15 4.542356e-16  
## PC29 1.174575e-15 -3.807908e-16 7.927648e-16 -3.625265e-16 3.034138e-16  
## PC30 -7.901421e-16 6.820564e-16 3.478536e-16 -1.343774e-16 8.964178e-17  
## PC31 2.437465e-16 1.503443e-15 -3.352732e-16 -8.847630e-16 9.526258e-16  
## PC32 3.109611e-15 -1.504454e-16 1.070060e-16 4.571862e-16 -7.725276e-16  
## PC33 7.390319e-17 1.473734e-15 -1.426106e-16 2.756239e-16 8.370375e-17  
## PC34 -1.579153e-15 1.713504e-15 7.791027e-16 3.412022e-17 4.592188e-16  
## PC35 -2.912794e-15 1.581580e-16 1.230024e-15 -7.564595e-16 1.032610e-15  
## PC36 -6.841718e-16 -8.076248e-16 4.214498e-16 3.912416e-17 -8.972046e-17  
## PC37 -4.313368e-15 -5.217858e-16 4.493768e-16 -6.357610e-16 9.386337e-16  
## PC38 -1.037833e-15 2.037524e-15 2.256675e-15 -2.803935e-16 -1.016080e-15  
## PC39 -1.046825e-15 -2.752288e-17 1.500191e-15 2.391963e-16 2.216987e-16  
## PC40 -1.645856e-15 -1.892119e-15 -3.347639e-16 -1.410822e-15 1.062673e-15  
## PC41 2.966132e-16 -8.060993e-16 -1.610471e-17 -5.555416e-16 -3.323087e-16  
## PC42 5.989468e-15 -2.268270e-15 7.199662e-16 1.177123e-15 5.833289e-16  
## PC43 -4.000890e-15 -2.616309e-15 -3.024500e-15 -1.427665e-15 1.645406e-15  
## PC44 -3.948558e-15 -9.748243e-16 -2.180661e-17 -2.062514e-15 4.456826e-16  
## PC45 2.981876e-15 -5.035907e-15 -2.425431e-15 -4.337545e-16 -6.025105e-16  
## PC46 6.799345e-15 -5.326642e-15 -3.234725e-16 -2.197396e-15 7.020445e-16  
## PC47 -1.557375e-15 4.580880e-15 -6.469632e-16 3.936707e-16 -1.166291e-15  
## PC48 8.339761e-15 -4.865874e-15 2.415178e-15 5.675801e-16 1.393108e-15  
## PC49 -1.426721e-15 8.128892e-16 1.045949e-15 5.053775e-16 -8.157351e-16  
## PC50 -4.615218e-16 -3.109063e-15 -3.630167e-15 6.789815e-16 -6.469640e-16  
## PC51 -2.576786e-15 3.927913e-15 4.427240e-16 -2.874846e-16 1.066874e-15  
## PC52 -4.211335e-15 5.406717e-15 1.809651e-15 1.581610e-15 -2.964928e-15  
## PC53 -6.201731e-15 -1.329387e-15 -1.276237e-15 -7.867358e-16 2.733155e-16  
## PC54 1.512179e-14 -6.911000e-15 -4.807056e-15 5.299083e-15 -2.289794e-16  
## PC55 -2.371419e-14 7.176511e-15 -2.611840e-14 -3.167102e-15 8.549381e-15  
## PC6 PC7 PC8 PC9 PC10  
## PC1 -3.502613e-17 9.858091e-16 4.180716e-16 -2.827011e-17 6.820950e-17  
## PC2 -7.326505e-17 2.487586e-16 3.261906e-16 8.671819e-18 -2.124900e-16  
## PC3 1.115412e-16 -5.924119e-17 1.660156e-16 -1.636844e-16 2.822535e-16  
## PC4 6.022567e-16 2.180510e-16 6.166770e-17 1.604136e-18 8.362641e-16  
## PC5 1.022356e-15 6.016331e-16 -2.850326e-16 1.084636e-16 2.767867e-16  
## PC6 1.000000e+00 6.612818e-17 4.039477e-16 9.074198e-17 1.394753e-16  
## PC7 6.612818e-17 1.000000e+00 4.295528e-18 2.217064e-16 3.258850e-17  
## PC8 4.039477e-16 4.295528e-18 1.000000e+00 -2.638272e-16 -1.869444e-16  
## PC9 9.074198e-17 2.217064e-16 -2.638272e-16 1.000000e+00 1.795425e-16  
## PC10 1.394753e-16 3.258850e-17 -1.869444e-16 1.795425e-16 1.000000e+00  
## PC11 1.575607e-16 1.484897e-16 -6.228991e-16 -3.372132e-16 -2.592928e-16  
## PC12 -5.681209e-17 2.770983e-16 8.011427e-16 -5.222420e-16 -2.127487e-15  
## PC13 3.517334e-16 9.471672e-17 4.982973e-17 -3.477635e-16 -1.088306e-15  
## PC14 -7.597206e-17 -2.346774e-16 -3.591003e-16 3.260530e-16 -2.481012e-16  
## PC15 -2.792690e-16 4.472972e-17 -2.156411e-16 -6.864499e-17 1.349983e-16  
## PC16 -2.874810e-16 -1.925273e-16 1.419761e-16 -1.244012e-16 -3.962331e-17  
## PC17 9.699444e-17 -5.862556e-16 -4.174673e-16 1.353685e-16 1.429108e-16  
## PC18 2.257369e-16 -5.642182e-16 1.241431e-16 2.081176e-16 7.535838e-16  
## PC19 4.827357e-17 -2.714089e-16 7.521472e-17 -1.112161e-16 -6.360853e-17  
## PC20 1.967472e-17 2.562440e-16 3.327559e-16 7.633410e-17 2.686024e-16  
## PC21 2.530178e-16 3.044410e-16 1.357619e-16 -9.226880e-17 -1.067500e-16  
## PC22 7.822614e-16 4.032070e-16 -2.681966e-16 4.180671e-16 -2.877039e-17  
## PC23 -6.879738e-16 -4.733303e-16 6.416217e-16 -2.264580e-16 3.159591e-16  
## PC24 2.593272e-16 -6.869781e-17 1.006754e-15 -8.041076e-18 -5.627609e-16  
## PC25 -1.817690e-16 -1.699871e-16 -5.900964e-17 8.266839e-16 3.832248e-16  
## PC26 -6.696962e-16 -7.721680e-16 1.243950e-16 -8.603399e-17 -1.759490e-17  
## PC27 -3.846921e-16 2.824700e-16 -4.856260e-17 1.011240e-15 -2.405961e-16  
## PC28 -5.036153e-19 8.447646e-17 4.328303e-16 3.122580e-16 5.607641e-16  
## PC29 8.474334e-16 3.369179e-16 6.900712e-16 7.233643e-17 -3.390553e-16  
## PC30 -7.286189e-16 4.210531e-16 -1.175369e-15 5.717130e-16 -4.605551e-16  
## PC31 -1.045449e-15 -1.098257e-15 -1.340747e-16 -8.104573e-17 5.163579e-16  
## PC32 5.772619e-16 1.249920e-16 -1.207865e-16 -7.752794e-16 -2.358382e-16  
## PC33 -3.015260e-16 7.206396e-16 -2.606867e-16 3.416741e-16 -5.565871e-16  
## PC34 5.696858e-16 4.129237e-16 -2.630457e-16 -8.330035e-16 1.494088e-16  
## PC35 -1.035415e-15 2.778453e-16 3.189285e-17 -2.730936e-16 7.468430e-16  
## PC36 -3.251912e-16 5.348294e-16 8.159202e-17 1.163560e-16 2.083361e-16  
## PC37 -4.537323e-16 1.037799e-15 7.770123e-16 7.951825e-16 7.912454e-16  
## PC38 5.701360e-17 4.150117e-16 -1.221994e-15 -2.558728e-16 -3.222140e-16  
## PC39 -5.404300e-16 2.255843e-16 1.098496e-16 -6.289320e-16 -6.750662e-16  
## PC40 -2.546371e-16 4.665099e-16 2.653720e-16 6.655479e-17 8.741851e-16  
## PC41 -4.409796e-16 1.145049e-15 6.832430e-16 -7.203302e-16 7.517405e-16  
## PC42 -7.358272e-16 -3.680795e-16 1.129760e-15 3.125085e-16 -1.253334e-15  
## PC43 8.717650e-16 -6.477941e-16 1.186121e-15 1.525015e-16 1.405128e-15  
## PC44 9.573390e-16 1.616551e-15 6.545262e-16 1.932205e-16 -1.238826e-16  
## PC45 1.543011e-15 1.560729e-15 -2.998205e-17 -3.056173e-16 -1.098417e-16  
## PC46 -1.816514e-15 7.486531e-16 1.873902e-15 8.630715e-16 1.486816e-16  
## PC47 -4.553477e-16 -1.059767e-16 -1.506607e-15 5.872877e-16 -1.084110e-17  
## PC48 -4.426494e-16 -1.123644e-15 -8.099419e-16 1.553258e-15 2.222367e-15  
## PC49 -4.790919e-16 -1.142912e-15 -1.214888e-15 -1.142527e-15 1.978089e-15  
## PC50 1.227776e-15 -1.732650e-15 4.106576e-17 -1.957515e-15 -1.360994e-17  
## PC51 -8.989328e-16 -6.993891e-16 -3.638225e-16 -6.797370e-16 4.905426e-16  
## PC52 9.339256e-16 6.111418e-16 6.512484e-16 2.725905e-15 3.393132e-15  
## PC53 -1.571765e-15 1.836059e-15 2.837171e-15 1.548987e-15 1.752071e-15  
## PC54 -2.632630e-16 -2.019415e-15 3.138514e-15 -9.637621e-16 -1.305982e-15  
## PC55 -6.434596e-17 -2.005102e-15 6.613837e-15 7.125237e-16 -2.976975e-15  
## PC11 PC12 PC13 PC14 PC15  
## PC1 7.510682e-16 5.248245e-16 5.087215e-16 3.053652e-16 1.631366e-16  
## PC2 -7.547618e-17 1.679478e-16 -1.416033e-16 3.126751e-16 -5.597159e-16  
## PC3 -6.085866e-16 6.660054e-16 -2.722058e-16 -7.720143e-17 -7.120952e-16  
## PC4 2.456381e-16 -2.534642e-16 -4.891191e-16 3.091189e-16 4.812628e-16  
## PC5 -2.077860e-16 4.571608e-17 1.989088e-16 5.514429e-16 5.511102e-16  
## PC6 1.575607e-16 -5.681209e-17 3.517334e-16 -7.597206e-17 -2.792690e-16  
## PC7 1.484897e-16 2.770983e-16 9.471672e-17 -2.346774e-16 4.472972e-17  
## PC8 -6.228991e-16 8.011427e-16 4.982973e-17 -3.591003e-16 -2.156411e-16  
## PC9 -3.372132e-16 -5.222420e-16 -3.477635e-16 3.260530e-16 -6.864499e-17  
## PC10 -2.592928e-16 -2.127487e-15 -1.088306e-15 -2.481012e-16 1.349983e-16  
## PC11 1.000000e+00 -3.335914e-15 -2.743405e-15 -2.730312e-17 -2.692235e-18  
## PC12 -3.335914e-15 1.000000e+00 3.461467e-16 -1.764407e-16 -5.071533e-16  
## PC13 -2.743405e-15 3.461467e-16 1.000000e+00 3.319877e-16 1.324979e-16  
## PC14 -2.730312e-17 -1.764407e-16 3.319877e-16 1.000000e+00 -1.410573e-16  
## PC15 -2.692235e-18 -5.071533e-16 1.324979e-16 -1.410573e-16 1.000000e+00  
## PC16 -8.280622e-17 2.720009e-16 -4.881592e-16 -7.666626e-16 -6.997326e-16  
## PC17 -2.676972e-16 -6.101996e-16 4.522520e-16 5.600801e-16 -1.107013e-16  
## PC18 1.183192e-15 -5.837958e-16 -2.815893e-16 5.643140e-16 -4.040717e-16  
## PC19 -2.562780e-16 2.266863e-16 3.909700e-16 -5.934920e-16 -5.499163e-16  
## PC20 3.251649e-17 -1.559112e-16 2.996968e-16 4.226894e-16 6.148490e-16  
## PC21 2.805907e-16 2.888283e-16 -5.387122e-16 -1.356288e-16 3.295113e-16  
## PC22 -3.743062e-17 1.041403e-16 -1.460654e-16 2.628476e-16 -1.444245e-16  
## PC23 -8.343193e-16 -5.289107e-16 -7.190589e-16 4.464358e-16 -4.539048e-16  
## PC24 -4.373002e-16 -5.489963e-17 7.578942e-16 5.242644e-16 -3.428352e-16  
## PC25 -1.035959e-16 6.865362e-16 -4.977162e-16 3.751398e-16 3.836638e-16  
## PC26 -6.277408e-17 6.114433e-16 2.181628e-17 5.975176e-16 -2.477701e-16  
## PC27 3.826122e-16 -6.544085e-16 2.013664e-16 1.444884e-16 -3.773282e-16  
## PC28 3.522421e-17 7.931757e-16 -1.413536e-16 1.172731e-16 -1.432516e-16  
## PC29 -1.071885e-16 -3.125884e-16 -1.280750e-17 4.492553e-16 -5.229876e-16  
## PC30 1.833493e-16 -3.202720e-17 -3.188070e-16 -2.363207e-16 -7.054053e-17  
## PC31 5.829833e-16 -4.553420e-16 -5.831932e-16 -6.302960e-16 4.015921e-17  
## PC32 -1.696701e-16 2.905473e-16 -1.325133e-16 -2.069157e-16 3.364148e-16  
## PC33 -1.448161e-16 -2.659673e-16 4.366507e-16 -3.472519e-16 5.156509e-16  
## PC34 4.877405e-16 5.671262e-16 -1.977874e-16 2.661848e-16 -1.065847e-16  
## PC35 -3.136177e-16 -5.363754e-16 8.547275e-17 -3.207476e-16 -9.966377e-16  
## PC36 -3.985007e-16 1.721762e-16 -6.051210e-16 -2.241680e-16 -1.646020e-16  
## PC37 -5.179241e-16 3.553533e-16 3.801012e-16 5.371315e-17 -3.521244e-16  
## PC38 -7.292203e-16 1.383337e-15 1.330725e-16 4.012673e-16 1.014849e-15  
## PC39 1.600568e-16 -2.049884e-16 1.847883e-17 -7.334909e-17 4.559183e-17  
## PC40 3.196939e-16 2.598011e-16 -7.459944e-16 7.665103e-17 -1.527500e-16  
## PC41 5.402624e-16 8.788336e-17 2.662275e-16 -2.996028e-16 -5.025550e-16  
## PC42 4.177232e-16 8.021431e-17 -3.271598e-17 -9.005601e-17 9.825180e-16  
## PC43 8.729831e-17 9.735000e-16 -5.809543e-16 7.879374e-16 -1.323531e-15  
## PC44 1.312426e-15 1.543789e-15 -6.534496e-16 -1.734903e-16 -1.089811e-15  
## PC45 1.020842e-15 -4.064273e-17 1.142508e-15 -3.544280e-16 4.516063e-16  
## PC46 1.510474e-16 1.122680e-15 -7.004991e-18 5.937327e-16 7.381874e-16  
## PC47 -3.214933e-16 2.577577e-16 8.152827e-16 -1.695318e-16 3.107250e-16  
## PC48 -1.937206e-15 2.939769e-16 -1.141289e-15 -3.843916e-16 -4.869669e-16  
## PC49 -1.104486e-15 -5.204884e-17 -4.774147e-16 1.105886e-15 -3.670451e-16  
## PC50 -5.829803e-16 1.551764e-15 -9.037639e-16 -5.151211e-16 -6.575418e-17  
## PC51 -1.349664e-15 1.472102e-16 2.073747e-16 1.371200e-15 1.472113e-15  
## PC52 -1.462256e-15 1.178407e-15 -2.162507e-17 -7.208154e-17 -1.203022e-15  
## PC53 1.590631e-15 5.367109e-16 -1.198493e-15 1.191949e-15 9.948790e-16  
## PC54 1.842317e-15 1.506753e-15 4.598209e-16 7.341088e-16 8.003084e-16  
## PC55 3.912451e-15 -4.653893e-16 1.914047e-15 -4.355513e-15 5.190839e-15  
## PC16 PC17 PC18 PC19 PC20  
## PC1 -9.673811e-16 -5.460246e-16 1.297492e-15 1.177996e-15 4.843865e-16  
## PC2 3.342477e-16 5.178218e-18 2.441497e-16 -4.846150e-16 -5.142729e-16  
## PC3 -2.495948e-16 -9.347479e-16 -4.038701e-16 -2.889679e-16 -5.281188e-16  
## PC4 -1.168007e-16 -1.110404e-16 -6.365918e-16 -2.871159e-17 -3.569727e-16  
## PC5 2.209989e-17 3.654529e-16 -4.105967e-17 2.476113e-16 -2.493655e-16  
## PC6 -2.874810e-16 9.699444e-17 2.257369e-16 4.827357e-17 1.967472e-17  
## PC7 -1.925273e-16 -5.862556e-16 -5.642182e-16 -2.714089e-16 2.562440e-16  
## PC8 1.419761e-16 -4.174673e-16 1.241431e-16 7.521472e-17 3.327559e-16  
## PC9 -1.244012e-16 1.353685e-16 2.081176e-16 -1.112161e-16 7.633410e-17  
## PC10 -3.962331e-17 1.429108e-16 7.535838e-16 -6.360853e-17 2.686024e-16  
## PC11 -8.280622e-17 -2.676972e-16 1.183192e-15 -2.562780e-16 3.251649e-17  
## PC12 2.720009e-16 -6.101996e-16 -5.837958e-16 2.266863e-16 -1.559112e-16  
## PC13 -4.881592e-16 4.522520e-16 -2.815893e-16 3.909700e-16 2.996968e-16  
## PC14 -7.666626e-16 5.600801e-16 5.643140e-16 -5.934920e-16 4.226894e-16  
## PC15 -6.997326e-16 -1.107013e-16 -4.040717e-16 -5.499163e-16 6.148490e-16  
## PC16 1.000000e+00 6.465602e-17 -1.639825e-16 -1.718404e-16 -9.294311e-16  
## PC17 6.465602e-17 1.000000e+00 3.191416e-16 -1.209996e-15 -7.889384e-16  
## PC18 -1.639825e-16 3.191416e-16 1.000000e+00 -5.610557e-16 2.423006e-16  
## PC19 -1.718404e-16 -1.209996e-15 -5.610557e-16 1.000000e+00 -6.786240e-16  
## PC20 -9.294311e-16 -7.889384e-16 2.423006e-16 -6.786240e-16 1.000000e+00  
## PC21 3.660106e-16 -1.444850e-16 2.243100e-16 -8.977780e-16 3.083873e-16  
## PC22 -5.125835e-16 -4.519018e-16 3.395428e-16 -5.157515e-16 -8.459999e-16  
## PC23 1.043943e-15 -5.819018e-16 -9.869614e-16 -7.039132e-19 -6.818644e-16  
## PC24 7.068924e-16 -6.326142e-16 -3.793014e-16 -6.422749e-17 3.920982e-16  
## PC25 -8.478200e-16 1.512950e-16 -6.868163e-17 1.622887e-16 -8.852758e-16  
## PC26 2.296254e-16 3.771123e-16 -5.618426e-16 -3.798087e-16 -2.136077e-16  
## PC27 -2.168827e-18 -1.294021e-17 -2.976063e-16 6.197422e-17 6.881295e-16  
## PC28 -7.481267e-16 4.963670e-16 -6.180697e-16 5.186824e-16 -6.925736e-17  
## PC29 6.702278e-17 6.494504e-16 -2.913888e-16 -6.907901e-16 1.324302e-16  
## PC30 7.232539e-17 5.178378e-16 -2.701458e-16 -1.474527e-16 5.784138e-16  
## PC31 -1.430529e-16 5.798785e-16 -3.895284e-16 7.695218e-16 5.063438e-16  
## PC32 4.950704e-16 -1.329960e-16 5.570945e-16 -3.884249e-16 2.165085e-16  
## PC33 8.091345e-16 9.784445e-17 7.639773e-16 -4.378909e-16 9.018663e-16  
## PC34 2.104343e-16 -4.781269e-16 3.124944e-16 1.892593e-16 -3.897367e-16  
## PC35 8.341359e-17 1.371210e-15 -4.351097e-16 -6.535591e-16 4.893505e-16  
## PC36 -3.731108e-16 3.756940e-16 1.162005e-16 -2.309217e-16 -5.341326e-16  
## PC37 -1.053243e-15 4.670647e-16 -2.484954e-16 -5.215719e-16 -4.438641e-16  
## PC38 7.300747e-16 6.118019e-16 5.580107e-16 7.884715e-16 -6.730494e-16  
## PC39 3.531033e-16 1.718947e-16 6.269034e-17 8.547989e-16 2.497426e-16  
## PC40 -1.251953e-16 -6.251017e-17 -1.488293e-15 1.645871e-16 -1.670298e-15  
## PC41 7.912649e-17 -2.340451e-16 -4.799095e-16 1.344493e-16 -7.543056e-16  
## PC42 3.463662e-16 -7.100065e-17 -1.285699e-16 8.493439e-16 7.991489e-16  
## PC43 -8.176490e-16 4.339981e-16 -3.866211e-16 -1.918814e-16 -3.165948e-16  
## PC44 -5.043819e-16 1.458842e-16 1.154201e-15 -1.688867e-16 -2.530664e-16  
## PC45 -3.719807e-16 1.228685e-15 -7.894300e-16 2.036859e-17 -1.522726e-15  
## PC46 -6.708235e-17 2.597106e-16 -1.235778e-16 -2.213528e-16 6.300162e-16  
## PC47 1.702652e-15 5.879848e-16 5.827369e-16 1.253251e-15 7.610671e-17  
## PC48 -9.186368e-16 8.517448e-16 -9.989855e-16 1.664577e-15 -2.240076e-15  
## PC49 3.891180e-16 -2.172822e-16 5.070953e-16 -2.030234e-16 7.649145e-17  
## PC50 5.923254e-16 -3.862313e-16 1.982688e-16 1.095275e-15 -1.604934e-15  
## PC51 3.891638e-15 8.306257e-16 -3.658409e-16 2.602871e-15 9.292009e-16  
## PC52 -1.920009e-15 6.842959e-16 -8.288928e-16 -2.490167e-16 2.595688e-15  
## PC53 -1.314567e-15 -1.359333e-16 -9.470164e-16 -1.997417e-15 -1.427122e-15  
## PC54 1.489067e-15 -7.310880e-16 1.289749e-15 2.288331e-16 3.201472e-15  
## PC55 -4.361132e-15 3.110766e-15 -3.219052e-15 1.861147e-15 8.669039e-15  
## PC21 PC22 PC23 PC24 PC25  
## PC1 2.241791e-15 1.515027e-15 -3.843859e-16 -9.208127e-16 -2.350675e-15  
## PC2 -4.545787e-16 -2.157157e-16 -1.031765e-15 -6.089802e-16 -1.382741e-15  
## PC3 6.760796e-16 -3.172644e-16 1.183090e-16 -1.189912e-15 7.103798e-17  
## PC4 3.587896e-16 3.435707e-16 4.451363e-17 -6.892753e-16 -6.984601e-17  
## PC5 2.691988e-16 3.000010e-16 5.520069e-17 -8.848295e-18 6.351014e-16  
## PC6 2.530178e-16 7.822614e-16 -6.879738e-16 2.593272e-16 -1.817690e-16  
## PC7 3.044410e-16 4.032070e-16 -4.733303e-16 -6.869781e-17 -1.699871e-16  
## PC8 1.357619e-16 -2.681966e-16 6.416217e-16 1.006754e-15 -5.900964e-17  
## PC9 -9.226880e-17 4.180671e-16 -2.264580e-16 -8.041076e-18 8.266839e-16  
## PC10 -1.067500e-16 -2.877039e-17 3.159591e-16 -5.627609e-16 3.832248e-16  
## PC11 2.805907e-16 -3.743062e-17 -8.343193e-16 -4.373002e-16 -1.035959e-16  
## PC12 2.888283e-16 1.041403e-16 -5.289107e-16 -5.489963e-17 6.865362e-16  
## PC13 -5.387122e-16 -1.460654e-16 -7.190589e-16 7.578942e-16 -4.977162e-16  
## PC14 -1.356288e-16 2.628476e-16 4.464358e-16 5.242644e-16 3.751398e-16  
## PC15 3.295113e-16 -1.444245e-16 -4.539048e-16 -3.428352e-16 3.836638e-16  
## PC16 3.660106e-16 -5.125835e-16 1.043943e-15 7.068924e-16 -8.478200e-16  
## PC17 -1.444850e-16 -4.519018e-16 -5.819018e-16 -6.326142e-16 1.512950e-16  
## PC18 2.243100e-16 3.395428e-16 -9.869614e-16 -3.793014e-16 -6.868163e-17  
## PC19 -8.977780e-16 -5.157515e-16 -7.039132e-19 -6.422749e-17 1.622887e-16  
## PC20 3.083873e-16 -8.459999e-16 -6.818644e-16 3.920982e-16 -8.852758e-16  
## PC21 1.000000e+00 -6.764875e-16 2.183338e-16 -9.744638e-18 2.387736e-16  
## PC22 -6.764875e-16 1.000000e+00 4.361660e-16 5.173640e-16 5.394104e-18  
## PC23 2.183338e-16 4.361660e-16 1.000000e+00 5.404791e-16 2.778306e-16  
## PC24 -9.744638e-18 5.173640e-16 5.404791e-16 1.000000e+00 -1.715962e-15  
## PC25 2.387736e-16 5.394104e-18 2.778306e-16 -1.715962e-15 1.000000e+00  
## PC26 -2.424101e-16 -2.667001e-16 2.867383e-16 -4.327900e-16 -2.319275e-16  
## PC27 -5.302587e-16 -2.623493e-16 5.806200e-16 4.341952e-16 1.713984e-17  
## PC28 1.638636e-16 1.269423e-16 2.713108e-16 -4.575438e-16 5.872249e-16  
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## PC30 -9.488019e-17 -2.099844e-16 -5.105652e-18 1.184139e-16 4.675531e-16  
## PC31 1.514359e-16 1.809225e-16 9.891875e-17 -7.863276e-17 1.213646e-16  
## PC32 -1.314155e-16 -2.442832e-16 4.794933e-17 3.317077e-16 -4.952323e-16  
## PC33 -4.942637e-16 -2.823699e-16 4.748989e-16 7.002804e-16 -4.727578e-16  
## PC34 4.994091e-16 1.116567e-15 -6.288721e-17 3.002426e-16 3.588596e-17  
## PC35 -1.884112e-16 8.627793e-16 4.149617e-16 -2.194530e-16 -2.111797e-16  
## PC36 2.900601e-16 -2.046032e-16 -3.266580e-16 -2.443264e-16 6.296970e-17  
## PC37 -5.490087e-16 -2.725527e-16 -5.014304e-16 1.019459e-15 8.295615e-16  
## PC38 3.243166e-16 6.328713e-16 1.446977e-16 1.106024e-15 3.724694e-16  
## PC39 4.525165e-16 7.067449e-16 -4.699115e-16 -7.938721e-17 2.297440e-16  
## PC40 -1.366507e-16 -3.253525e-16 -2.542503e-16 -2.302885e-16 8.020639e-16  
## PC41 2.768456e-17 6.083133e-16 1.358931e-16 5.668524e-16 -9.218013e-17  
## PC42 -3.888655e-16 -1.076816e-15 2.991423e-16 -3.463402e-16 -5.850616e-16  
## PC43 -6.083335e-16 -8.680399e-19 -7.853078e-16 5.022043e-16 4.203570e-16  
## PC44 -3.889853e-17 2.813663e-16 -1.370609e-15 1.299825e-15 -9.281055e-17  
## PC45 -9.239775e-16 9.694385e-16 -1.342410e-15 -1.643379e-16 -4.174835e-16  
## PC46 -5.000848e-16 -2.543275e-16 -9.080725e-16 4.890899e-17 3.206767e-16  
## PC47 -2.631630e-16 8.802510e-16 1.136908e-15 -4.223236e-16 -2.902853e-16  
## PC48 7.666356e-16 3.707146e-16 -2.019199e-15 1.626394e-17 1.365677e-15  
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## PC50 1.784080e-15 -7.400748e-16 -1.007186e-15 -7.872068e-16 2.582186e-15  
## PC51 1.795598e-16 1.674707e-15 1.958373e-15 6.785058e-16 8.541802e-16  
## PC52 2.872782e-15 -1.439685e-15 -8.698266e-16 -3.953488e-16 6.954825e-16  
## PC53 -2.275802e-15 2.262966e-16 -8.670245e-16 -9.838475e-16 3.992058e-16  
## PC54 2.260522e-16 1.413111e-17 1.614833e-15 -5.256429e-16 -1.095585e-15  
## PC55 -5.498579e-16 1.527680e-15 2.876191e-15 2.295975e-15 1.708588e-15  
## PC26 PC27 PC28 PC29 PC30  
## PC1 3.215976e-15 3.050423e-15 -6.426220e-16 1.174575e-15 -7.901421e-16  
## PC2 -1.076600e-15 1.541720e-15 -1.002721e-15 -3.807908e-16 6.820564e-16  
## PC3 -4.216003e-16 -6.065348e-16 -5.299986e-16 7.927648e-16 3.478536e-16  
## PC4 -3.913651e-16 9.547810e-16 -1.766537e-15 -3.625265e-16 -1.343774e-16  
## PC5 5.718469e-16 3.081804e-17 4.542356e-16 3.034138e-16 8.964178e-17  
## PC6 -6.696962e-16 -3.846921e-16 -5.036153e-19 8.474334e-16 -7.286189e-16  
## PC7 -7.721680e-16 2.824700e-16 8.447646e-17 3.369179e-16 4.210531e-16  
## PC8 1.243950e-16 -4.856260e-17 4.328303e-16 6.900712e-16 -1.175369e-15  
## PC9 -8.603399e-17 1.011240e-15 3.122580e-16 7.233643e-17 5.717130e-16  
## PC10 -1.759490e-17 -2.405961e-16 5.607641e-16 -3.390553e-16 -4.605551e-16  
## PC11 -6.277408e-17 3.826122e-16 3.522421e-17 -1.071885e-16 1.833493e-16  
## PC12 6.114433e-16 -6.544085e-16 7.931757e-16 -3.125884e-16 -3.202720e-17  
## PC13 2.181628e-17 2.013664e-16 -1.413536e-16 -1.280750e-17 -3.188070e-16  
## PC14 5.975176e-16 1.444884e-16 1.172731e-16 4.492553e-16 -2.363207e-16  
## PC15 -2.477701e-16 -3.773282e-16 -1.432516e-16 -5.229876e-16 -7.054053e-17  
## PC16 2.296254e-16 -2.168827e-18 -7.481267e-16 6.702278e-17 7.232539e-17  
## PC17 3.771123e-16 -1.294021e-17 4.963670e-16 6.494504e-16 5.178378e-16  
## PC18 -5.618426e-16 -2.976063e-16 -6.180697e-16 -2.913888e-16 -2.701458e-16  
## PC19 -3.798087e-16 6.197422e-17 5.186824e-16 -6.907901e-16 -1.474527e-16  
## PC20 -2.136077e-16 6.881295e-16 -6.925736e-17 1.324302e-16 5.784138e-16  
## PC21 -2.424101e-16 -5.302587e-16 1.638636e-16 -6.068556e-16 -9.488019e-17  
## PC22 -2.667001e-16 -2.623493e-16 1.269423e-16 -1.584249e-16 -2.099844e-16  
## PC23 2.867383e-16 5.806200e-16 2.713108e-16 -3.179833e-16 -5.105652e-18  
## PC24 -4.327900e-16 4.341952e-16 -4.575438e-16 -5.804310e-17 1.184139e-16  
## PC25 -2.319275e-16 1.713984e-17 5.872249e-16 -1.452830e-16 4.675531e-16  
## PC26 1.000000e+00 -1.313075e-16 6.289067e-16 -9.187349e-17 -6.532677e-16  
## PC27 -1.313075e-16 1.000000e+00 -1.282992e-16 1.828134e-16 -6.873969e-16  
## PC28 6.289067e-16 -1.282992e-16 1.000000e+00 2.089812e-16 1.131961e-16  
## PC29 -9.187349e-17 1.828134e-16 2.089812e-16 1.000000e+00 -2.611968e-16  
## PC30 -6.532677e-16 -6.873969e-16 1.131961e-16 -2.611968e-16 1.000000e+00  
## PC31 3.257052e-16 1.085100e-16 -3.931964e-17 -2.953009e-16 4.254902e-16  
## PC32 -4.230080e-16 6.060445e-16 1.296378e-16 3.536017e-16 -3.200632e-16  
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## PC34 -8.529195e-17 -9.365032e-17 -6.475521e-17 -2.566243e-16 -4.344675e-16  
## PC35 4.455530e-16 -3.427382e-16 2.063331e-16 4.197283e-16 9.508390e-16  
## PC36 4.237778e-16 -5.166012e-16 1.035710e-16 1.625098e-16 -6.542876e-16  
## PC37 1.538836e-15 1.090090e-15 3.993202e-16 9.105002e-16 1.432812e-16  
## PC38 6.926968e-16 6.260984e-16 -7.098657e-16 -7.791722e-17 -3.160362e-17  
## PC39 2.215304e-16 -1.311512e-15 -8.989443e-17 -4.290752e-16 -3.800495e-16  
## PC40 7.432560e-16 2.393964e-16 4.596166e-16 9.963297e-16 4.034095e-16  
## PC41 7.175081e-16 -1.095653e-16 -4.464893e-16 -4.543227e-16 9.051067e-16  
## PC42 -8.266868e-16 6.890441e-16 -7.732039e-16 -1.032885e-16 -1.301896e-15  
## PC43 1.020118e-15 1.184035e-16 7.325063e-16 3.916881e-16 9.218433e-16  
## PC44 -6.252265e-16 -6.226112e-17 -2.508576e-16 4.245954e-16 -3.944190e-16  
## PC45 -5.690859e-17 -1.450360e-17 -1.754215e-16 -1.617411e-16 1.119354e-15  
## PC46 1.147520e-16 2.610053e-16 -9.131807e-18 7.486571e-17 3.654519e-16  
## PC47 -1.305019e-16 5.163969e-16 -3.729659e-16 -1.893693e-16 5.166933e-16  
## PC48 1.417544e-15 1.524902e-15 9.136876e-17 5.113668e-16 9.514778e-16  
## PC49 2.981875e-16 7.867796e-16 5.945547e-16 -4.426137e-17 -3.083667e-16  
## PC50 6.850916e-16 -8.154852e-16 -5.631916e-16 -1.859161e-15 -7.305904e-16  
## PC51 9.518649e-16 -2.004385e-15 -7.475309e-16 -4.824555e-16 -1.436649e-15  
## PC52 -8.628372e-16 5.032494e-16 1.577316e-15 2.169519e-15 -1.830359e-15  
## PC53 7.058830e-16 1.656691e-15 9.556692e-16 8.770435e-16 6.863093e-16  
## PC54 1.038862e-15 1.294689e-15 5.923979e-16 1.989576e-16 -1.860977e-16  
## PC55 -1.024176e-15 -2.392876e-15 3.502385e-15 -2.548452e-15 -3.354669e-15  
## PC31 PC32 PC33 PC34 PC35  
## PC1 2.437465e-16 3.109611e-15 7.390319e-17 -1.579153e-15 -2.912794e-15  
## PC2 1.503443e-15 -1.504454e-16 1.473734e-15 1.713504e-15 1.581580e-16  
## PC3 -3.352732e-16 1.070060e-16 -1.426106e-16 7.791027e-16 1.230024e-15  
## PC4 -8.847630e-16 4.571862e-16 2.756239e-16 3.412022e-17 -7.564595e-16  
## PC5 9.526258e-16 -7.725276e-16 8.370375e-17 4.592188e-16 1.032610e-15  
## PC6 -1.045449e-15 5.772619e-16 -3.015260e-16 5.696858e-16 -1.035415e-15  
## PC7 -1.098257e-15 1.249920e-16 7.206396e-16 4.129237e-16 2.778453e-16  
## PC8 -1.340747e-16 -1.207865e-16 -2.606867e-16 -2.630457e-16 3.189285e-17  
## PC9 -8.104573e-17 -7.752794e-16 3.416741e-16 -8.330035e-16 -2.730936e-16  
## PC10 5.163579e-16 -2.358382e-16 -5.565871e-16 1.494088e-16 7.468430e-16  
## PC11 5.829833e-16 -1.696701e-16 -1.448161e-16 4.877405e-16 -3.136177e-16  
## PC12 -4.553420e-16 2.905473e-16 -2.659673e-16 5.671262e-16 -5.363754e-16  
## PC13 -5.831932e-16 -1.325133e-16 4.366507e-16 -1.977874e-16 8.547275e-17  
## PC14 -6.302960e-16 -2.069157e-16 -3.472519e-16 2.661848e-16 -3.207476e-16  
## PC15 4.015921e-17 3.364148e-16 5.156509e-16 -1.065847e-16 -9.966377e-16  
## PC16 -1.430529e-16 4.950704e-16 8.091345e-16 2.104343e-16 8.341359e-17  
## PC17 5.798785e-16 -1.329960e-16 9.784445e-17 -4.781269e-16 1.371210e-15  
## PC18 -3.895284e-16 5.570945e-16 7.639773e-16 3.124944e-16 -4.351097e-16  
## PC19 7.695218e-16 -3.884249e-16 -4.378909e-16 1.892593e-16 -6.535591e-16  
## PC20 5.063438e-16 2.165085e-16 9.018663e-16 -3.897367e-16 4.893505e-16  
## PC21 1.514359e-16 -1.314155e-16 -4.942637e-16 4.994091e-16 -1.884112e-16  
## PC22 1.809225e-16 -2.442832e-16 -2.823699e-16 1.116567e-15 8.627793e-16  
## PC23 9.891875e-17 4.794933e-17 4.748989e-16 -6.288721e-17 4.149617e-16  
## PC24 -7.863276e-17 3.317077e-16 7.002804e-16 3.002426e-16 -2.194530e-16  
## PC25 1.213646e-16 -4.952323e-16 -4.727578e-16 3.588596e-17 -2.111797e-16  
## PC26 3.257052e-16 -4.230080e-16 4.476791e-16 -8.529195e-17 4.455530e-16  
## PC27 1.085100e-16 6.060445e-16 -1.122933e-16 -9.365032e-17 -3.427382e-16  
## PC28 -3.931964e-17 1.296378e-16 2.798559e-16 -6.475521e-17 2.063331e-16  
## PC29 -2.953009e-16 3.536017e-16 -6.612614e-16 -2.566243e-16 4.197283e-16  
## PC30 4.254902e-16 -3.200632e-16 8.355048e-16 -4.344675e-16 9.508390e-16  
## PC31 1.000000e+00 1.130764e-16 -7.526126e-17 -3.675952e-16 2.193689e-16  
## PC32 1.130764e-16 1.000000e+00 1.077493e-15 -1.800298e-17 -6.544019e-16  
## PC33 -7.526126e-17 1.077493e-15 1.000000e+00 9.451801e-17 1.828436e-16  
## PC34 -3.675952e-16 -1.800298e-17 9.451801e-17 1.000000e+00 2.852168e-16  
## PC35 2.193689e-16 -6.544019e-16 1.828436e-16 2.852168e-16 1.000000e+00  
## PC36 -2.347882e-16 3.604853e-16 -3.333858e-16 -6.146825e-16 1.134406e-15  
## PC37 1.654233e-16 -5.870744e-16 5.546893e-16 -3.262790e-16 2.301682e-16  
## PC38 -1.742335e-16 6.285470e-16 6.527385e-16 1.378358e-16 2.009298e-16  
## PC39 -1.943278e-16 7.252790e-17 -3.525731e-16 1.940963e-16 5.365995e-16  
## PC40 6.571191e-16 -6.776943e-16 3.639787e-16 5.317047e-16 -5.198033e-16  
## PC41 -1.322021e-15 -6.101197e-16 4.551331e-16 -4.679927e-16 -3.092677e-16  
## PC42 -4.819269e-16 -3.569789e-16 -2.386448e-16 -9.799956e-16 4.299987e-16  
## PC43 3.597144e-16 -5.564642e-16 -2.641028e-17 1.428575e-17 -4.640142e-17  
## PC44 3.039296e-16 -1.327847e-15 1.028430e-15 -1.093379e-16 1.220093e-15  
## PC45 -7.389482e-17 9.206699e-17 -8.741681e-17 1.518832e-16 -5.859631e-16  
## PC46 3.617370e-16 9.362883e-17 2.660543e-16 -7.963708e-16 6.706741e-16  
## PC47 1.046436e-15 1.375388e-15 -4.985315e-16 2.770768e-16 -4.832129e-16  
## PC48 5.727421e-16 -1.322182e-15 7.780688e-16 7.123964e-16 -4.068178e-16  
## PC49 -1.105820e-15 -1.166479e-15 5.836609e-16 8.423238e-16 3.768662e-16  
## PC50 5.449275e-16 -2.965588e-16 -6.248197e-16 -3.607647e-16 -3.504124e-16  
## PC51 8.444973e-16 7.098711e-16 1.115995e-15 4.710419e-16 -6.182886e-16  
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## PC54 -2.842775e-15 2.715407e-15 -1.049237e-15 -1.801424e-15 1.357790e-15  
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## PC36 PC37 PC38 PC39 PC40  
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## PC2 -8.076248e-16 -5.217858e-16 2.037524e-15 -2.752288e-17 -1.892119e-15  
## PC3 4.214498e-16 4.493768e-16 2.256675e-15 1.500191e-15 -3.347639e-16  
## PC4 3.912416e-17 -6.357610e-16 -2.803935e-16 2.391963e-16 -1.410822e-15  
## PC5 -8.972046e-17 9.386337e-16 -1.016080e-15 2.216987e-16 1.062673e-15  
## PC6 -3.251912e-16 -4.537323e-16 5.701360e-17 -5.404300e-16 -2.546371e-16  
## PC7 5.348294e-16 1.037799e-15 4.150117e-16 2.255843e-16 4.665099e-16  
## PC8 8.159202e-17 7.770123e-16 -1.221994e-15 1.098496e-16 2.653720e-16  
## PC9 1.163560e-16 7.951825e-16 -2.558728e-16 -6.289320e-16 6.655479e-17  
## PC10 2.083361e-16 7.912454e-16 -3.222140e-16 -6.750662e-16 8.741851e-16  
## PC11 -3.985007e-16 -5.179241e-16 -7.292203e-16 1.600568e-16 3.196939e-16  
## PC12 1.721762e-16 3.553533e-16 1.383337e-15 -2.049884e-16 2.598011e-16  
## PC13 -6.051210e-16 3.801012e-16 1.330725e-16 1.847883e-17 -7.459944e-16  
## PC14 -2.241680e-16 5.371315e-17 4.012673e-16 -7.334909e-17 7.665103e-17  
## PC15 -1.646020e-16 -3.521244e-16 1.014849e-15 4.559183e-17 -1.527500e-16  
## PC16 -3.731108e-16 -1.053243e-15 7.300747e-16 3.531033e-16 -1.251953e-16  
## PC17 3.756940e-16 4.670647e-16 6.118019e-16 1.718947e-16 -6.251017e-17  
## PC18 1.162005e-16 -2.484954e-16 5.580107e-16 6.269034e-17 -1.488293e-15  
## PC19 -2.309217e-16 -5.215719e-16 7.884715e-16 8.547989e-16 1.645871e-16  
## PC20 -5.341326e-16 -4.438641e-16 -6.730494e-16 2.497426e-16 -1.670298e-15  
## PC21 2.900601e-16 -5.490087e-16 3.243166e-16 4.525165e-16 -1.366507e-16  
## PC22 -2.046032e-16 -2.725527e-16 6.328713e-16 7.067449e-16 -3.253525e-16  
## PC23 -3.266580e-16 -5.014304e-16 1.446977e-16 -4.699115e-16 -2.542503e-16  
## PC24 -2.443264e-16 1.019459e-15 1.106024e-15 -7.938721e-17 -2.302885e-16  
## PC25 6.296970e-17 8.295615e-16 3.724694e-16 2.297440e-16 8.020639e-16  
## PC26 4.237778e-16 1.538836e-15 6.926968e-16 2.215304e-16 7.432560e-16  
## PC27 -5.166012e-16 1.090090e-15 6.260984e-16 -1.311512e-15 2.393964e-16  
## PC28 1.035710e-16 3.993202e-16 -7.098657e-16 -8.989443e-17 4.596166e-16  
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## PC30 -6.542876e-16 1.432812e-16 -3.160362e-17 -3.800495e-16 4.034095e-16  
## PC31 -2.347882e-16 1.654233e-16 -1.742335e-16 -1.943278e-16 6.571191e-16  
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## PC35 1.134406e-15 2.301682e-16 2.009298e-16 5.365995e-16 -5.198033e-16  
## PC36 1.000000e+00 2.485949e-16 -3.331828e-16 -2.165100e-15 5.256829e-16  
## PC37 2.485949e-16 1.000000e+00 -6.539568e-16 -8.703398e-16 -1.086010e-17  
## PC38 -3.331828e-16 -6.539568e-16 1.000000e+00 4.108437e-16 -1.027720e-15  
## PC39 -2.165100e-15 -8.703398e-16 4.108437e-16 1.000000e+00 7.763127e-16  
## PC40 5.256829e-16 -1.086010e-17 -1.027720e-15 7.763127e-16 1.000000e+00  
## PC41 1.710409e-15 -1.660960e-15 -6.931836e-16 9.636737e-16 3.458879e-16  
## PC42 -7.839190e-16 4.542689e-17 -1.332594e-15 -1.284128e-15 -7.185780e-17  
## PC43 1.173131e-15 9.051168e-18 1.597066e-17 6.200701e-16 2.372040e-16  
## PC44 -1.808453e-16 1.619303e-15 -7.856692e-16 -2.740794e-16 6.741525e-16  
## PC45 1.178948e-15 -5.821851e-16 -6.766346e-16 1.739849e-16 -8.513888e-16  
## PC46 7.269255e-16 3.373502e-16 1.003069e-15 -4.353667e-16 -5.306386e-18  
## PC47 2.788871e-16 -1.815507e-17 1.493348e-16 -8.025662e-16 -3.166481e-16  
## PC48 3.530892e-16 -3.298317e-16 -1.067778e-15 1.305689e-15 -2.132164e-16  
## PC49 -1.683064e-16 9.882986e-17 2.962926e-16 -8.016307e-16 -1.159671e-15  
## PC50 -3.739420e-16 8.811741e-17 -2.582147e-16 2.228056e-15 2.458297e-16  
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## PC52 9.457882e-16 9.799160e-16 -6.817330e-16 -1.508118e-15 7.012649e-16  
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## PC54 1.430745e-15 1.137301e-15 -9.948161e-16 1.137306e-15 -1.038676e-15  
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## PC41 PC42 PC43 PC44 PC45  
## PC1 2.966132e-16 5.989468e-15 -4.000890e-15 -3.948558e-15 2.981876e-15  
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## PC3 -1.610471e-17 7.199662e-16 -3.024500e-15 -2.180661e-17 -2.425431e-15  
## PC4 -5.555416e-16 1.177123e-15 -1.427665e-15 -2.062514e-15 -4.337545e-16  
## PC5 -3.323087e-16 5.833289e-16 1.645406e-15 4.456826e-16 -6.025105e-16  
## PC6 -4.409796e-16 -7.358272e-16 8.717650e-16 9.573390e-16 1.543011e-15  
## PC7 1.145049e-15 -3.680795e-16 -6.477941e-16 1.616551e-15 1.560729e-15  
## PC8 6.832430e-16 1.129760e-15 1.186121e-15 6.545262e-16 -2.998205e-17  
## PC9 -7.203302e-16 3.125085e-16 1.525015e-16 1.932205e-16 -3.056173e-16  
## PC10 7.517405e-16 -1.253334e-15 1.405128e-15 -1.238826e-16 -1.098417e-16  
## PC11 5.402624e-16 4.177232e-16 8.729831e-17 1.312426e-15 1.020842e-15  
## PC12 8.788336e-17 8.021431e-17 9.735000e-16 1.543789e-15 -4.064273e-17  
## PC13 2.662275e-16 -3.271598e-17 -5.809543e-16 -6.534496e-16 1.142508e-15  
## PC14 -2.996028e-16 -9.005601e-17 7.879374e-16 -1.734903e-16 -3.544280e-16  
## PC15 -5.025550e-16 9.825180e-16 -1.323531e-15 -1.089811e-15 4.516063e-16  
## PC16 7.912649e-17 3.463662e-16 -8.176490e-16 -5.043819e-16 -3.719807e-16  
## PC17 -2.340451e-16 -7.100065e-17 4.339981e-16 1.458842e-16 1.228685e-15  
## PC18 -4.799095e-16 -1.285699e-16 -3.866211e-16 1.154201e-15 -7.894300e-16  
## PC19 1.344493e-16 8.493439e-16 -1.918814e-16 -1.688867e-16 2.036859e-17  
## PC20 -7.543056e-16 7.991489e-16 -3.165948e-16 -2.530664e-16 -1.522726e-15  
## PC21 2.768456e-17 -3.888655e-16 -6.083335e-16 -3.889853e-17 -9.239775e-16  
## PC22 6.083133e-16 -1.076816e-15 -8.680399e-19 2.813663e-16 9.694385e-16  
## PC23 1.358931e-16 2.991423e-16 -7.853078e-16 -1.370609e-15 -1.342410e-15  
## PC24 5.668524e-16 -3.463402e-16 5.022043e-16 1.299825e-15 -1.643379e-16  
## PC25 -9.218013e-17 -5.850616e-16 4.203570e-16 -9.281055e-17 -4.174835e-16  
## PC26 7.175081e-16 -8.266868e-16 1.020118e-15 -6.252265e-16 -5.690859e-17  
## PC27 -1.095653e-16 6.890441e-16 1.184035e-16 -6.226112e-17 -1.450360e-17  
## PC28 -4.464893e-16 -7.732039e-16 7.325063e-16 -2.508576e-16 -1.754215e-16  
## PC29 -4.543227e-16 -1.032885e-16 3.916881e-16 4.245954e-16 -1.617411e-16  
## PC30 9.051067e-16 -1.301896e-15 9.218433e-16 -3.944190e-16 1.119354e-15  
## PC31 -1.322021e-15 -4.819269e-16 3.597144e-16 3.039296e-16 -7.389482e-17  
## PC32 -6.101197e-16 -3.569789e-16 -5.564642e-16 -1.327847e-15 9.206699e-17  
## PC33 4.551331e-16 -2.386448e-16 -2.641028e-17 1.028430e-15 -8.741681e-17  
## PC34 -4.679927e-16 -9.799956e-16 1.428575e-17 -1.093379e-16 1.518832e-16  
## PC35 -3.092677e-16 4.299987e-16 -4.640142e-17 1.220093e-15 -5.859631e-16  
## PC36 1.710409e-15 -7.839190e-16 1.173131e-15 -1.808453e-16 1.178948e-15  
## PC37 -1.660960e-15 4.542689e-17 9.051168e-18 1.619303e-15 -5.821851e-16  
## PC38 -6.931836e-16 -1.332594e-15 1.597066e-17 -7.856692e-16 -6.766346e-16  
## PC39 9.636737e-16 -1.284128e-15 6.200701e-16 -2.740794e-16 1.739849e-16  
## PC40 3.458879e-16 -7.185780e-17 2.372040e-16 6.741525e-16 -8.513888e-16  
## PC41 1.000000e+00 -6.237246e-16 1.024705e-15 5.507662e-16 2.386312e-16  
## PC42 -6.237246e-16 1.000000e+00 1.267352e-15 -7.965435e-16 5.568379e-16  
## PC43 1.024705e-15 1.267352e-15 1.000000e+00 7.180124e-17 8.056840e-16  
## PC44 5.507662e-16 -7.965435e-16 7.180124e-17 1.000000e+00 3.454039e-16  
## PC45 2.386312e-16 5.568379e-16 8.056840e-16 3.454039e-16 1.000000e+00  
## PC46 -4.399084e-16 -3.633043e-16 -3.550563e-17 4.544087e-16 -9.591447e-16  
## PC47 5.608197e-17 8.671240e-16 2.951258e-16 -1.174599e-16 7.004370e-16  
## PC48 -7.780015e-16 2.687477e-16 2.163540e-16 4.545239e-16 -5.566156e-16  
## PC49 -2.603076e-16 -1.123206e-15 2.241013e-15 -1.238362e-15 1.076727e-15  
## PC50 1.002199e-15 -8.688487e-16 -1.163761e-16 -1.589414e-15 3.882687e-16  
## PC51 -6.878598e-16 -1.683796e-15 1.907351e-16 -2.417480e-15 6.073588e-16  
## PC52 2.776866e-16 -6.195382e-16 7.334960e-16 1.734915e-15 -1.274684e-16  
## PC53 -3.609587e-16 9.267872e-16 4.097215e-16 4.027720e-16 -3.474905e-16  
## PC54 1.222251e-15 2.187098e-15 4.687715e-16 -2.931369e-16 -2.917711e-16  
## PC55 3.282067e-16 4.221952e-15 -1.431072e-15 1.055503e-15 2.001098e-15  
## PC46 PC47 PC48 PC49 PC50  
## PC1 6.799345e-15 -1.557375e-15 8.339761e-15 -1.426721e-15 -4.615218e-16  
## PC2 -5.326642e-15 4.580880e-15 -4.865874e-15 8.128892e-16 -3.109063e-15  
## PC3 -3.234725e-16 -6.469632e-16 2.415178e-15 1.045949e-15 -3.630167e-15  
## PC4 -2.197396e-15 3.936707e-16 5.675801e-16 5.053775e-16 6.789815e-16  
## PC5 7.020445e-16 -1.166291e-15 1.393108e-15 -8.157351e-16 -6.469640e-16  
## PC6 -1.816514e-15 -4.553477e-16 -4.426494e-16 -4.790919e-16 1.227776e-15  
## PC7 7.486531e-16 -1.059767e-16 -1.123644e-15 -1.142912e-15 -1.732650e-15  
## PC8 1.873902e-15 -1.506607e-15 -8.099419e-16 -1.214888e-15 4.106576e-17  
## PC9 8.630715e-16 5.872877e-16 1.553258e-15 -1.142527e-15 -1.957515e-15  
## PC10 1.486816e-16 -1.084110e-17 2.222367e-15 1.978089e-15 -1.360994e-17  
## PC11 1.510474e-16 -3.214933e-16 -1.937206e-15 -1.104486e-15 -5.829803e-16  
## PC12 1.122680e-15 2.577577e-16 2.939769e-16 -5.204884e-17 1.551764e-15  
## PC13 -7.004991e-18 8.152827e-16 -1.141289e-15 -4.774147e-16 -9.037639e-16  
## PC14 5.937327e-16 -1.695318e-16 -3.843916e-16 1.105886e-15 -5.151211e-16  
## PC15 7.381874e-16 3.107250e-16 -4.869669e-16 -3.670451e-16 -6.575418e-17  
## PC16 -6.708235e-17 1.702652e-15 -9.186368e-16 3.891180e-16 5.923254e-16  
## PC17 2.597106e-16 5.879848e-16 8.517448e-16 -2.172822e-16 -3.862313e-16  
## PC18 -1.235778e-16 5.827369e-16 -9.989855e-16 5.070953e-16 1.982688e-16  
## PC19 -2.213528e-16 1.253251e-15 1.664577e-15 -2.030234e-16 1.095275e-15  
## PC20 6.300162e-16 7.610671e-17 -2.240076e-15 7.649145e-17 -1.604934e-15  
## PC21 -5.000848e-16 -2.631630e-16 7.666356e-16 9.056969e-16 1.784080e-15  
## PC22 -2.543275e-16 8.802510e-16 3.707146e-16 -1.816603e-16 -7.400748e-16  
## PC23 -9.080725e-16 1.136908e-15 -2.019199e-15 -4.071232e-16 -1.007186e-15  
## PC24 4.890899e-17 -4.223236e-16 1.626394e-17 -3.298617e-16 -7.872068e-16  
## PC25 3.206767e-16 -2.902853e-16 1.365677e-15 1.779021e-16 2.582186e-15  
## PC26 1.147520e-16 -1.305019e-16 1.417544e-15 2.981875e-16 6.850916e-16  
## PC27 2.610053e-16 5.163969e-16 1.524902e-15 7.867796e-16 -8.154852e-16  
## PC28 -9.131807e-18 -3.729659e-16 9.136876e-17 5.945547e-16 -5.631916e-16  
## PC29 7.486571e-17 -1.893693e-16 5.113668e-16 -4.426137e-17 -1.859161e-15  
## PC30 3.654519e-16 5.166933e-16 9.514778e-16 -3.083667e-16 -7.305904e-16  
## PC31 3.617370e-16 1.046436e-15 5.727421e-16 -1.105820e-15 5.449275e-16  
## PC32 9.362883e-17 1.375388e-15 -1.322182e-15 -1.166479e-15 -2.965588e-16  
## PC33 2.660543e-16 -4.985315e-16 7.780688e-16 5.836609e-16 -6.248197e-16  
## PC34 -7.963708e-16 2.770768e-16 7.123964e-16 8.423238e-16 -3.607647e-16  
## PC35 6.706741e-16 -4.832129e-16 -4.068178e-16 3.768662e-16 -3.504124e-16  
## PC36 7.269255e-16 2.788871e-16 3.530892e-16 -1.683064e-16 -3.739420e-16  
## PC37 3.373502e-16 -1.815507e-17 -3.298317e-16 9.882986e-17 8.811741e-17  
## PC38 1.003069e-15 1.493348e-16 -1.067778e-15 2.962926e-16 -2.582147e-16  
## PC39 -4.353667e-16 -8.025662e-16 1.305689e-15 -8.016307e-16 2.228056e-15  
## PC40 -5.306386e-18 -3.166481e-16 -2.132164e-16 -1.159671e-15 2.458297e-16  
## PC41 -4.399084e-16 5.608197e-17 -7.780015e-16 -2.603076e-16 1.002199e-15  
## PC42 -3.633043e-16 8.671240e-16 2.687477e-16 -1.123206e-15 -8.688487e-16  
## PC43 -3.550563e-17 2.951258e-16 2.163540e-16 2.241013e-15 -1.163761e-16  
## PC44 4.544087e-16 -1.174599e-16 4.545239e-16 -1.238362e-15 -1.589414e-15  
## PC45 -9.591447e-16 7.004370e-16 -5.566156e-16 1.076727e-15 3.882687e-16  
## PC46 1.000000e+00 5.419136e-16 -1.108433e-16 -7.718321e-17 -1.084098e-15  
## PC47 5.419136e-16 1.000000e+00 1.009652e-15 -5.141907e-16 1.101182e-15  
## PC48 -1.108433e-16 1.009652e-15 1.000000e+00 1.364301e-16 -1.071192e-15  
## PC49 -7.718321e-17 -5.141907e-16 1.364301e-16 1.000000e+00 -1.764565e-16  
## PC50 -1.084098e-15 1.101182e-15 -1.071192e-15 -1.764565e-16 1.000000e+00  
## PC51 -2.206672e-16 1.241831e-16 1.267450e-15 -4.159170e-16 8.475671e-16  
## PC52 7.226816e-16 -1.239085e-15 3.499562e-16 7.432104e-16 -3.730148e-16  
## PC53 -8.579892e-16 1.435767e-15 -1.543890e-16 -2.013793e-16 -4.128784e-16  
## PC54 -1.660155e-15 3.229129e-16 9.619812e-16 -3.143106e-16 2.960443e-17  
## PC55 -4.801516e-15 9.812195e-16 2.393017e-15 -1.559630e-15 2.194055e-15  
## PC51 PC52 PC53 PC54 PC55  
## PC1 -2.576786e-15 -4.211335e-15 -6.201731e-15 1.512179e-14 -2.371419e-14  
## PC2 3.927913e-15 5.406717e-15 -1.329387e-15 -6.911000e-15 7.176511e-15  
## PC3 4.427240e-16 1.809651e-15 -1.276237e-15 -4.807056e-15 -2.611840e-14  
## PC4 -2.874846e-16 1.581610e-15 -7.867358e-16 5.299083e-15 -3.167102e-15  
## PC5 1.066874e-15 -2.964928e-15 2.733155e-16 -2.289794e-16 8.549381e-15  
## PC6 -8.989328e-16 9.339256e-16 -1.571765e-15 -2.632630e-16 -6.434596e-17  
## PC7 -6.993891e-16 6.111418e-16 1.836059e-15 -2.019415e-15 -2.005102e-15  
## PC8 -3.638225e-16 6.512484e-16 2.837171e-15 3.138514e-15 6.613837e-15  
## PC9 -6.797370e-16 2.725905e-15 1.548987e-15 -9.637621e-16 7.125237e-16  
## PC10 4.905426e-16 3.393132e-15 1.752071e-15 -1.305982e-15 -2.976975e-15  
## PC11 -1.349664e-15 -1.462256e-15 1.590631e-15 1.842317e-15 3.912451e-15  
## PC12 1.472102e-16 1.178407e-15 5.367109e-16 1.506753e-15 -4.653893e-16  
## PC13 2.073747e-16 -2.162507e-17 -1.198493e-15 4.598209e-16 1.914047e-15  
## PC14 1.371200e-15 -7.208154e-17 1.191949e-15 7.341088e-16 -4.355513e-15  
## PC15 1.472113e-15 -1.203022e-15 9.948790e-16 8.003084e-16 5.190839e-15  
## PC16 3.891638e-15 -1.920009e-15 -1.314567e-15 1.489067e-15 -4.361132e-15  
## PC17 8.306257e-16 6.842959e-16 -1.359333e-16 -7.310880e-16 3.110766e-15  
## PC18 -3.658409e-16 -8.288928e-16 -9.470164e-16 1.289749e-15 -3.219052e-15  
## PC19 2.602871e-15 -2.490167e-16 -1.997417e-15 2.288331e-16 1.861147e-15  
## PC20 9.292009e-16 2.595688e-15 -1.427122e-15 3.201472e-15 8.669039e-15  
## PC21 1.795598e-16 2.872782e-15 -2.275802e-15 2.260522e-16 -5.498579e-16  
## PC22 1.674707e-15 -1.439685e-15 2.262966e-16 1.413111e-17 1.527680e-15  
## PC23 1.958373e-15 -8.698266e-16 -8.670245e-16 1.614833e-15 2.876191e-15  
## PC24 6.785058e-16 -3.953488e-16 -9.838475e-16 -5.256429e-16 2.295975e-15  
## PC25 8.541802e-16 6.954825e-16 3.992058e-16 -1.095585e-15 1.708588e-15  
## PC26 9.518649e-16 -8.628372e-16 7.058830e-16 1.038862e-15 -1.024176e-15  
## PC27 -2.004385e-15 5.032494e-16 1.656691e-15 1.294689e-15 -2.392876e-15  
## PC28 -7.475309e-16 1.577316e-15 9.556692e-16 5.923979e-16 3.502385e-15  
## PC29 -4.824555e-16 2.169519e-15 8.770435e-16 1.989576e-16 -2.548452e-15  
## PC30 -1.436649e-15 -1.830359e-15 6.863093e-16 -1.860977e-16 -3.354669e-15  
## PC31 8.444973e-16 -4.419748e-16 6.939873e-16 -2.842775e-15 -4.462227e-16  
## PC32 7.098711e-16 4.542351e-16 -1.319270e-15 2.715407e-15 2.531753e-15  
## PC33 1.115995e-15 -2.602201e-16 -1.227467e-15 -1.049237e-15 -3.298781e-15  
## PC34 4.710419e-16 3.890969e-17 -1.555607e-15 -1.801424e-15 -8.068895e-16  
## PC35 -6.182886e-16 -6.359640e-17 -7.195479e-16 1.357790e-15 1.413782e-15  
## PC36 -4.346648e-16 9.457882e-16 1.801159e-15 1.430745e-15 1.565992e-15  
## PC37 -2.908435e-16 9.799160e-16 -3.263937e-16 1.137301e-15 4.615429e-15  
## PC38 6.105190e-16 -6.817330e-16 1.375221e-15 -9.948161e-16 -4.552175e-17  
## PC39 -4.343640e-17 -1.508118e-15 -1.287338e-15 1.137306e-15 5.586587e-16  
## PC40 1.071022e-16 7.012649e-16 -1.621856e-16 -1.038676e-15 1.027314e-15  
## PC41 -6.878598e-16 2.776866e-16 -3.609587e-16 1.222251e-15 3.282067e-16  
## PC42 -1.683796e-15 -6.195382e-16 9.267872e-16 2.187098e-15 4.221952e-15  
## PC43 1.907351e-16 7.334960e-16 4.097215e-16 4.687715e-16 -1.431072e-15  
## PC44 -2.417480e-15 1.734915e-15 4.027720e-16 -2.931369e-16 1.055503e-15  
## PC45 6.073588e-16 -1.274684e-16 -3.474905e-16 -2.917711e-16 2.001098e-15  
## PC46 -2.206672e-16 7.226816e-16 -8.579892e-16 -1.660155e-15 -4.801516e-15  
## PC47 1.241831e-16 -1.239085e-15 1.435767e-15 3.229129e-16 9.812195e-16  
## PC48 1.267450e-15 3.499562e-16 -1.543890e-16 9.619812e-16 2.393017e-15  
## PC49 -4.159170e-16 7.432104e-16 -2.013793e-16 -3.143106e-16 -1.559630e-15  
## PC50 8.475671e-16 -3.730148e-16 -4.128784e-16 2.960443e-17 2.194055e-15  
## PC51 1.000000e+00 -4.581601e-16 -2.334765e-16 1.214484e-15 1.764403e-15  
## PC52 -4.581601e-16 1.000000e+00 -5.423439e-16 1.877402e-15 2.156628e-15  
## PC53 -2.334765e-16 -5.423439e-16 1.000000e+00 -5.273506e-16 -1.487212e-15  
## PC54 1.214484e-15 1.877402e-15 -5.273506e-16 1.000000e+00 -2.097069e-15  
## PC55 1.764403e-15 2.156628e-15 -1.487212e-15 -2.097069e-15 1.000000e+00

#-----------------  
#Predict using PCA  
  
PredictingData<- predict(GDPdataTrainSet.pca.normdata, newdata = GDPdata.test.set )  
PredictingData[,1:5]

## PC1 PC2 PC3 PC4 PC5  
## 9 -5.5194051 -0.10766027 -0.2544859 0.46046377 -1.02886427  
## 10 -4.3781235 -0.91165749 0.9789718 -0.50680896 -0.60919255  
## 13 -4.9517347 -1.40080365 -2.4795809 -1.01835351 0.53947096  
## 15 3.5527866 3.17496560 -1.2952853 -0.32510422 -0.04199866  
## 16 -3.7460325 -1.25410569 0.8669891 -0.82514165 -0.62568731  
## 23 3.7525384 -1.12141083 2.1286531 0.35150401 -1.48213734  
## 25 -4.0103073 2.50540156 0.3708595 -0.72650465 0.58991553  
## 29 -4.7740176 0.92758964 0.5448685 -0.92545164 -0.10282721  
## 33 4.3755236 3.94263908 0.4784741 0.33555424 0.93575763  
## 35 -4.9701490 1.92371389 0.2489350 -0.77169740 0.63392972  
## 37 3.1088614 3.59264753 0.6647496 -0.89362352 0.53780820  
## 39 5.5855387 -3.35225225 2.7513900 -0.74206659 0.38643005  
## 41 6.7760065 -1.51914541 0.4329688 -0.09233201 -0.91698985  
## 42 6.2916452 -0.27728308 0.9626095 2.61061376 0.05479405  
## 51 12.1891052 2.57403373 -2.2959040 4.23734433 -0.06336177  
## 58 -1.8165346 2.07995086 0.2665036 -0.14127276 -0.20188075  
## 62 3.9543951 -3.11013607 -1.2980956 3.15216223 -0.48564233  
## 64 -6.2466460 0.45274686 0.7058206 -1.00373756 -0.87781311  
## 65 4.8494882 -2.79172086 -1.0433030 4.57834923 0.23444722  
## 66 -4.8233810 -0.40942098 0.9878597 -0.18793410 -0.17073817  
## 67 -2.1147586 2.02705635 0.4261278 -1.28944033 0.14535088  
## 71 8.0860135 1.71118473 -0.1011737 0.77720599 3.70498987  
## 78 -3.0346413 -3.56584582 -1.9948379 0.99971062 0.37176088  
## 79 14.6280737 -4.46757778 1.6568256 -3.09081590 0.59086526  
## 80 9.1520618 4.45309713 -1.3575220 1.90422063 0.54251173  
## 85 -2.3421149 1.58496847 0.1417768 0.02347830 0.02761711  
## 86 0.2807473 2.17735906 -0.1204314 1.13592615 -0.77864977  
## 89 7.1425581 -2.82067428 2.3598236 -0.79250804 -0.13233426  
## 95 -3.5978361 0.03239765 1.4702717 -0.32232433 -0.50248467  
## 105 -3.7115528 1.38050456 0.1199375 -0.74668250 0.15957150  
## 106 -6.8431324 -0.95418218 0.6017401 -0.49956418 -0.48889294  
## 107 -6.8907490 -2.30570029 1.0043001 0.71171474 0.87495109  
## 109 1.2793142 2.04207389 0.4377416 -0.21083131 0.83696732  
## 111 -6.3829143 -2.50175562 1.0129775 0.63808186 1.20155900  
## 112 -4.6811546 1.19626632 0.6895885 -0.75345965 0.31612008  
## 114 5.3235381 -7.29172478 -2.6533885 9.13914494 -0.34090061  
## 116 -5.8104970 -1.85927029 0.4255469 0.76485677 0.56116279  
## 117 -0.7693986 2.73898985 0.8647473 -0.48542952 0.22490696  
## 118 3.4983169 3.15018559 -0.4012886 -0.40853162 0.21774030  
## 119 -7.0410142 -2.24426533 1.1457371 0.16638539 0.91322323  
## 120 -0.8417069 0.99337385 -0.7501265 0.87085025 0.02414962  
## 121 8.2356554 1.84022464 -4.4642738 2.96774789 1.47836238  
## 129 11.9883291 3.57388432 -1.4342957 4.28319741 -1.19791684  
## 131 -6.3596217 -2.17302937 0.8500534 0.59475173 0.88230251  
## 135 1.4138547 -1.96606246 -0.5073014 1.81817885 -2.35455460  
## 140 5.6557947 2.08952147 0.4176483 1.07355866 -0.65748971  
## 150 -5.4260076 -1.14297674 0.0561659 0.97532060 0.23926419  
## 157 5.3963979 -0.77910019 2.2626156 3.60711725 -0.38536465

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END.