random_data_generation_code

September 13, 2021

```
[355]: import numpy
       import pandas
[356]: myData = pandas.DataFrame()
       myData
[356]: Empty DataFrame
       Columns: []
       Index: []
[357]: # count of the current col
       count = 0
[358]: # inserting the roll no col
       # index to insert , col name , what to insert
       myData.insert(count , "rollNo" , list(range(100000 , 100000 + 50000)))
       # icreamenting the count so that we will insert next col in next index
       count = count + 1
       myData
[358]:
              rollNo
              100000
       0
       1
              100001
       2
              100002
       3
              100003
       4
              100004
       49995 149995
       49996 149996
       49997 149997
       49998 149998
       49999 149999
       [50000 rows x 1 columns]
```

```
[359]: # importing names , external csv from kaggle
       namesDf = pandas.read_csv("names.csv")
       namesDf
[359]:
             last name
                           first name gender
                                                race
                                            m black
                 aaron
                             aaric a
       1
                 aaron
                         dominique j
                                            m black
       2
                 aaron
                          fredrick r
                                            m black
       3
                                            m black
                             jarvis
                 aaron
                 aaron
                            lorenzo
                                            m black
                 •••
                                           m black
       35076
                rogers
                           freddie 1
                                            m black
       35077
                rogers
                          fredrick c
                                           m black
       35078
                rogers
                            gregory
       35079
                rogers
                             irvin c
                                           m black
       35080
                            isaiah f
                                                   b
                rogers
                                           m
       [35081 rows x 4 columns]
[360]: # inserting the names
       myData.insert(count , "first name" , namesDf["first name"])
       count = count + 1
[361]:
      myData
                         first name
[361]:
              rollNo
              100000
       0
                           aaric a
       1
              100001
                       dominique j
       2
              100002
                        fredrick r
       3
              100003
                           jarvis
              100004
                          lorenzo
       49995 149995
                                NaN
       49996
             149996
                                NaN
       49997
              149997
                                NaN
       49998
              149998
                                NaN
       49999
              149999
                                NaN
       [50000 rows x 2 columns]
[362]: # making a list of first names
       import random
       firstNameList = list(namesDf["first name"])
```

```
[363]: # names were only 37000 we needed 50000
       # so were are insert random names from he names list above in the cols having_
       →nan value
       for i in myData.index:
           # to check if the dataframe col is Nan
           if(pandas.isnull(myData.at[i, "first name"])):
               myData.at[i, "first name"] = random.choice(firstNameList)
[364]: myData
[364]:
              rollNo
                         first name
              100000
                           aaric a
       1
              100001
                       dominique j
       2
              100002
                        fredrick r
       3
              100003
                           jarvis
              100004
                          lorenzo
       49995 149995
                        leonard jr
       49996 149996
                             john
       49997 149997
                           demoy p
       49998 149998
                        shedrick s
       49999 149999
                          dennis 1
       [50000 rows x 2 columns]
[365]: # inserting the last names
       myData.insert(count , "last name" , namesDf["last name"])
       count = count + 1
[366]: myData
[366]:
              rollNo
                         first name last name
       0
              100000
                           aaric a
                                        aaron
       1
              100001
                       dominique j
                                         aaron
       2
              100002
                       fredrick r
                                         aaron
       3
              100003
                           jarvis
                                         aaron
       4
              100004
                          lorenzo
                                         aaron
                        leonard jr
       49995 149995
                                           NaN
       49996 149996
                             john
                                           NaN
       49997
             149997
                           demoy p
                                           NaN
       49998 149998
                        shedrick s
                                           {\tt NaN}
              149999
       49999
                          dennis 1
                                           NaN
       [50000 rows x 3 columns]
```

```
[367]: # making a list of first names
       lastNameList = list(namesDf["last name"])
[368]: # names were only 37000 we needed 50000
       # so were are insert random names from he names list above in the cols having
       →nan value
       for i in myData.index:
           # to check if the dataframe col is Nan
           if(pandas.isnull(myData.at[i, "last name"])):
               myData.at[i, "last name"] = random.choice(lastNameList)
[369]: myData
[369]:
              rollNo
                         first name last name
              100000
       0
                           aaric a
                                        aaron
       1
              100001
                       dominique j
                                        aaron
              100002
       2
                        fredrick r
                                        aaron
       3
              100003
                           jarvis
                                        aaron
              100004
                          lorenzo
                                         aaron
                        leonard jr
       49995 149995
                                       hanton
       49996
             149996
                             john
                                        clark
       49997
              149997
                                       johnson
                           demoy p
       49998 149998
                        shedrick s
                                          jean
       49999
             149999
                          dennis 1
                                      mustafa
       [50000 rows x 3 columns]
[370]: # inserting full name col
       myData.insert(count , "fullName" , [i + j for i,j in zip(myData["first name"] ,_
        →myData["last name"])])
       # icreamenting the count so that we will insert next col in next index
       count = count + 1
       myData
[370]:
              rollNo
                         first name last name
                                                          fullName
              100000
       0
                                                     aaric a aaron
                           aaric a
                                        aaron
       1
              100001
                       dominique j
                                                 dominique j aaron
                                        aaron
       2
              100002
                        fredrick r
                                                  fredrick r aaron
                                        aaron
       3
              100003
                           jarvis
                                                     jarvis aaron
                                         aaron
              100004
                          lorenzo
                                         aaron
                                                    lorenzo aaron
       49995 149995
                        leonard jr
                                       hanton
                                                 leonard jrhanton
```

```
49996 149996
                            john
                                       clark
                                                      john clark
      49997
             149997
                                                 demoy p johnson
                           demoy p
                                      johnson
      49998
             149998
                        shedrick s
                                         jean
                                                  shedrick s jean
      49999 149999
                         dennis 1
                                     mustafa
                                                 dennis 1 mustafa
      [50000 rows x 4 columns]
[371]: # adding branches col name
      branches = ["CSE" , "COE" , "ECE" , "MEC" , "BOT", "ENC" , "CSE-MBA" ,
       randomList50000 = []
      for i in range(50000):
          randomList50000.append(random.choice(branches))
      myData.insert(count , "branch" , randomList50000)
      count = count + 1
      myData
[371]:
                        first name last name
             rollNo
                                                        fullName
                                                                   branch
              100000
                                                                      ECE
      0
                           aaric a
                                                   aaric a aaron
                                       aaron
                      dominique j
      1
              100001
                                       aaron
                                                dominique j aaron
                                                                       COE
      2
              100002
                       fredrick r
                                                 fredrick r aaron
                                                                       CSE
                                       aaron
      3
              100003
                           jarvis
                                                    jarvis aaron MEC-MBA
                                       aaron
              100004
                         lorenzo
                                                  lorenzo
                                                                      F.NC
                                       aaron
                                                           aaron
      49995 149995
                       leonard jr
                                      hanton
                                                leonard jrhanton MEC-MBA
      49996 149996
                            john
                                                      john clark
                                                                       CSE
                                       clark
      49997 149997
                           demoy p
                                      johnson
                                                 demoy p johnson
                                                                      ECE
                        shedrick s
                                                 shedrick s jean
                                                                      MEC
      49998 149998
                                         jean
      49999 149999
                         dennis 1
                                                 dennis 1 mustafa
                                     mustafa
                                                                      ENC
      [50000 rows x 5 columns]
[372]: # inserting major list
      CSE COE_Majors = ["AI" , "Data Science" , "cloud" , "cyber"]
      ECE_ENC_Majors = ["Micro electronic" , "IOT" , "Robotics"]
      CSE_COE_Majors_applicables = ["CSE" , "COE" , "CSE-MBA"]
      ECE_ENC_Majors_applicables = ["ECE" , "ENC" , "ECE-MBA"]
      for i in myData.index:
           if(myData.at[i, "branch"] in CSE COE Majors applicables):
              myData.at[i, "major"] = random.choice(CSE_COE_Majors)
           elif(myData.at[i, "branch"] in ECE ENC Majors applicables):
```

```
else:
               myData.at[i, "major"] = numpy.nan
       count = count + 1
       myData
[372]:
              rollNo
                          first name last name
                                                            fullName
                                                                       branch
              100000
                            aaric a
                                          aaron
                                                      aaric a aaron
                                                                           ECE
       1
              100001
                        dominique j
                                          aaron
                                                  dominique j aaron
                                                                           COE
       2
              100002
                         fredrick r
                                                   fredrick r aaron
                                                                           CSE
                                          aaron
                            jarvis
       3
              100003
                                          aaron
                                                       jarvis aaron
                                                                     MEC-MBA
              100004
                           lorenzo
                                          aaron
                                                     lorenzo aaron
                                                                          ENC
       49995
              149995
                         leonard jr
                                         hanton
                                                  leonard jrhanton
                                                                     MEC-MBA
       49996
                                                         john clark
                                                                           CSE
              149996
                              john
                                          clark
       49997
              149997
                            demoy p
                                        johnson
                                                    demoy p johnson
                                                                          ECE
       49998
              149998
                         shedrick s
                                                    shedrick s jean
                                                                          MEC
                                           jean
       49999
              149999
                           dennis 1
                                       mustafa
                                                   dennis 1 mustafa
                                                                          ENC
                          major
       0
                       Robotics
       1
                          cyber
       2
                          cyber
       3
                            NaN
              Micro electronic
       49995
                            NaN
       49996
                             ΑI
       49997
                       Robotics
       49998
                            NaN
       49999
                       Robotics
       [50000 rows x 6 columns]
[373]: # adding year col name
       for i in myData.index:
               myData.at[i, "year"] = int(random.randint(1 , 4))
       count = count + 1
       myData
[373]:
              rollNo
                          first name last name
                                                            fullName
                                                                       branch
              100000
       0
                                                                          ECE
                            aaric a
                                                      aaric a aaron
                                          aaron
       1
              100001
                                                                          COE
                        dominique j
                                                  dominique j aaron
                                          aaron
```

myData.at[i, "major"] = random.choice(ECE_ENC_Majors)

```
3
              100003
                                                                     MEC-MBA
                           jarvis
                                         aaron
                                                     jarvis aaron
       4
              100004
                          lorenzo
                                         aaron
                                                    lorenzo
                                                             aaron
                                                                         ENC
       49995
              149995
                                        hanton
                                                 leonard jrhanton MEC-MBA
                        leonard jr
       49996
              149996
                             john
                                         clark
                                                       john clark
                                                                         CSE
              149997
       49997
                                       johnson
                                                   demoy p johnson
                                                                         ECE
                           demoy p
                                                   shedrick s jean
       49998
              149998
                        shedrick s
                                          jean
                                                                         MEC
                                                  dennis 1 mustafa
       49999
             149999
                          dennis 1
                                       mustafa
                                                                         ENC
                         major year
       0
                      Robotics
                                  3.0
       1
                         cyber
                                  2.0
       2
                         cyber
                                  1.0
       3
                                  4.0
                           {\tt NaN}
       4
              Micro electronic
                                  4.0
       49995
                                  2.0
                           NaN
                                  4.0
       49996
                            AΙ
       49997
                      Robotics
                                  2.0
       49998
                                  4.0
                           NaN
       49999
                                  1.0
                      Robotics
       [50000 rows x 7 columns]
[374]: # adding year col name
       for i in myData.index:
               # semester can be either current year * 2 or current year * 2 - 1
               myData.at[i, "sem"] = random.choice([(myData.at[i, "year"] * 2) - 1, ___
        count = count + 1
       myData
[374]:
                         first name last name
                                                                      branch \
              rollNo
                                                          fullName
              100000
       0
                           aaric a
                                         aaron
                                                     aaric a aaron
                                                                         ECE
       1
                                                                         COE
              100001
                       dominique j
                                                 dominique j aaron
                                         aaron
       2
              100002
                        fredrick r
                                                  fredrick r aaron
                                                                         CSE
                                         aaron
       3
              100003
                           jarvis
                                                     jarvis aaron
                                                                     MEC-MBA
                                         aaron
              100004
                          lorenzo
                                                    lorenzo
                                                                         ENC
                                         aaron
                                                             aaron
       49995
              149995
                        leonard jr
                                        hanton
                                                 leonard jrhanton
                                                                    MEC-MBA
       49996
                                                       john clark
                                                                         CSE
             149996
                             john
                                         clark
                                                   demoy p johnson
                                                                         ECE
       49997
              149997
                           demoy p
                                       johnson
                        shedrick s
                                                   shedrick s jean
       49998
             149998
                                          jean
                                                                         MEC
       49999
              149999
                          dennis 1
                                       mustafa
                                                  dennis 1 mustafa
                                                                         ENC
```

aaron

fredrick r aaron

CSE

2

100002

fredrick r

```
major year sem
0
               Robotics
                          3.0
                               6.0
                          2.0
1
                  cyber
                               3.0
2
                  cyber
                          1.0 2.0
                          4.0 8.0
3
                    NaN
4
       Micro electronic
                          4.0 7.0
49995
                          2.0 3.0
                    NaN
49996
                     ΑI
                          4.0 8.0
               Robotics
                          2.0 4.0
49997
49998
                    NaN
                          4.0 7.0
49999
               Robotics
                          1.0 1.0
```

[50000 rows x 8 columns]

```
[375]:
              rollNo
                         first name last name
                                                           fullName
                                                                      branch \
       0
              100000
                            aaric a
                                                      aaric a aaron
                                                                         ECE
                                         aaron
       1
              100001
                       dominique j
                                                  dominique j aaron
                                                                          COE
                                         aaron
              100002
       2
                        fredrick r
                                                  fredrick r aaron
                                                                          CSE
                                         aaron
       3
              100003
                                                                     MEC-MBA
                            jarvis
                                         aaron
                                                      jarvis aaron
       4
              100004
                                                     lorenzo
                                                                          ENC
                           lorenzo
                                         aaron
                                                              aaron
       49995 149995
                         leonard jr
                                        hanton
                                                  leonard jrhanton
                                                                     MEC-MBA
       49996
              149996
                                         clark
                                                        john clark
                                                                          CSE
                              john
                                                                         ECE
       49997
              149997
                            demoy p
                                       johnson
                                                    demoy p johnson
       49998
              149998
                         shedrick s
                                                    shedrick s jean
                                                                         MEC
                                          jean
       49999
             149999
                           dennis 1
                                       mustafa
                                                   dennis 1 mustafa
                                                                         ENC
                         major year sem
                                                fees
       0
                      Robotics
                                  3.0
                                           170000.0
                                       6.0
       1
                         cyber
                                  2.0
                                       3.0
                                            190000.0
       2
                          cyber
                                  1.0
                                      2.0
                                            200000.0
```

```
3
                    {\tt NaN}
                          4.0 8.0 180000.0
4
                          4.0 7.0
                                     185000.0
       Micro electronic
49995
                               3.0
                                     180000.0
                    NaN
                          2.0
49996
                     AΙ
                          4.0 8.0 200000.0
                          2.0 4.0 170000.0
49997
               Robotics
49998
                    NaN
                          4.0 7.0 130000.0
49999
                           1.0 1.0
               Robotics
                                     185000.0
[50000 rows x 9 columns]
```

myData

[376]: # inserting total program fee col and program duration col # MBA is of 5 years for i in myData.index: if(str(myData.at[i, "branch"]).find("MBA") != -1): myData.at[i, "program duration"] = 5 myData.at[i, "total program fee"] = myData.at[i, "fees"] * 5 * 2 else: myData.at[i, "program duration"] = 4 myData.at[i, "total program fee"] = myData.at[i, "fees"] * 4 * 2 count = count + 1

```
[376]:
              rollNo
                         first name last name
                                                           fullName
                                                                       branch \
       0
              100000
                            aaric a
                                         aaron
                                                      aaric a aaron
                                                                          ECE
                        dominique j
              100001
                                                  dominique j aaron
                                                                          COE
       1
                                         aaron
       2
              100002
                         fredrick r
                                                   fredrick r aaron
                                                                          CSE
                                         aaron
       3
              100003
                            jarvis
                                                      jarvis aaron
                                                                     MEC-MBA
                                         aaron
       4
              100004
                           lorenzo
                                                     lorenzo
                                                                          ENC
                                         aaron
                                                              aaron
                         leonard jr
                                                  leonard jrhanton
       49995 149995
                                        hanton
                                                                     MEC-MBA
                                         clark
                                                        john clark
       49996
              149996
                              john
                                                                          CSE
       49997
              149997
                            demoy p
                                       johnson
                                                    demoy p johnson
                                                                          ECE
       49998 149998
                         shedrick s
                                          jean
                                                    shedrick s jean
                                                                          MEC
       49999
             149999
                           dennis 1
                                       mustafa
                                                   dennis 1 mustafa
                                                                          ENC
                         major
                                year
                                                 fees
                                                       program duration
                                       sem
       0
                      Robotics
                                  3.0
                                       6.0
                                            170000.0
                                                                     4.0
                                                                     4.0
       1
                                  2.0
                                       3.0
                                            190000.0
                          cyber
       2
                                  1.0 2.0
                                            200000.0
                                                                     4.0
                          cyber
       3
                            {\tt NaN}
                                  4.0 8.0
                                            180000.0
                                                                     5.0
              Micro electronic
                                  4.0
                                       7.0
                                            185000.0
                                                                     4.0
       49995
                            NaN
                                  2.0
                                       3.0 180000.0
                                                                     5.0
```

```
49997
                                   2.0 4.0
                                             170000.0
                                                                      4.0
                       Robotics
                                   4.0
                                                                      4.0
       49998
                            NaN
                                        7.0
                                             130000.0
                                   1.0
                                       1.0
                                                                      4.0
       49999
                       Robotics
                                             185000.0
              total program fee
       0
                       1360000.0
       1
                       1520000.0
       2
                       1600000.0
       3
                       1800000.0
       4
                       1480000.0
       49995
                       1800000.0
       49996
                       1600000.0
       49997
                       1360000.0
                       1040000.0
       49998
       49999
                       1480000.0
       [50000 rows x 11 columns]
[377]: # inserting paid fee col
       for i in myData.index:
               myData.at[i, "paid fee"] = bool(random.randint(0,1))
       count = count + 1
       myData
[377]:
              rollNo
                          first name last name
                                                            fullName
                                                                        branch
       0
               100000
                            aaric a
                                          aaron
                                                       aaric a aaron
                                                                           ECE
       1
               100001
                                                   dominique j aaron
                        dominique j
                                                                           COE
                                          aaron
       2
               100002
                         fredrick r
                                                    fredrick r aaron
                                                                           CSE
                                          aaron
       3
               100003
                            jarvis
                                                       jarvis aaron
                                                                       MEC-MBA
                                          aaron
       4
               100004
                                                      lorenzo
                                                                           ENC
                           lorenzo
                                          aaron
                                                               aaron
                         leonard jr
                                                                      MEC-MBA
       49995
              149995
                                         hanton
                                                   leonard jrhanton
       49996
              149996
                              john
                                          clark
                                                         john clark
                                                                           CSE
              149997
                                                     demoy p johnson
                                                                           ECE
       49997
                            demoy p
                                        johnson
       49998
              149998
                         shedrick s
                                           jean
                                                     shedrick s jean
                                                                           MEC
              149999
       49999
                           dennis 1
                                        mustafa
                                                    dennis 1 mustafa
                                                                           ENC
                          major
                                 year
                                        sem
                                                  fees
                                                        program duration
       0
                       Robotics
                                   3.0
                                        6.0
                                             170000.0
                                                                      4.0
       1
                                   2.0
                                        3.0
                                             190000.0
                                                                      4.0
                          cyber
       2
                                   1.0
                                        2.0
                                             200000.0
                                                                      4.0
                          cyber
       3
                                   4.0
                                       8.0
                            NaN
                                             180000.0
                                                                      5.0
```

4.0 8.0 200000.0

AΙ

4.0

49996

```
49995
                            NaN
                                  2.0
                                       3.0
                                             180000.0
                                                                     5.0
                                  4.0 8.0
                                             200000.0
                                                                     4.0
       49996
                             AΙ
       49997
                       Robotics
                                  2.0 4.0
                                             170000.0
                                                                     4.0
                                  4.0 7.0
                                                                     4.0
       49998
                            NaN
                                             130000.0
       49999
                       Robotics
                                  1.0 1.0
                                             185000.0
                                                                     4.0
              total program fee paid fee
       0
                       1360000.0
       1
                       1520000.0
                                     True
       2
                       1600000.0
                                    False
       3
                       1800000.0
                                     True
       4
                       1480000.0
                                     True
       49995
                       1800000.0
                                     True
                                     True
       49996
                       1600000.0
       49997
                       1360000.0
                                     True
                                     True
       49998
                       1040000.0
       49999
                       1480000.0
                                     True
       [50000 rows x 12 columns]
[378]: # inserting CGPA col
       for i in myData.index:
              myData.at[i, "CGPA"] = random.random() + random.randint(5 , 9)
       count = count + 1
       myData
[378]:
                          first name last name
              rollNo
                                                            fullName
                                                                       branch \
       0
              100000
                            aaric a
                                          aaron
                                                      aaric a aaron
                                                                          ECE
       1
              100001
                        dominique j
                                                  dominique j aaron
                                                                          COE
                                          aaron
              100002
                         fredrick r
                                          aaron
                                                   fredrick r aaron
                                                                          CSE
       3
              100003
                                                      jarvis aaron MEC-MBA
                            jarvis
                                          aaron
       4
              100004
                           lorenzo
                                          aaron
                                                     lorenzo
                                                               aaron
                                                                          ENC
                                                  leonard jrhanton
                                                                     MEC-MBA
       49995
              149995
                         leonard jr
                                        hanton
       49996
              149996
                              john
                                          clark
                                                        john clark
                                                                          CSE
              149997
                                                    demoy p johnson
                                                                          ECE
       49997
                            demoy p
                                        johnson
                                                    shedrick s jean
       49998
              149998
                         shedrick s
                                           jean
                                                                          MEC
       49999
              149999
                           dennis 1
                                       mustafa
                                                   dennis 1 mustafa
                                                                          ENC
                          major year
                                                 fees program duration
                                       sem
                                                                     4.0
       0
                       Robotics
                                  3.0
                                            170000.0
                                       6.0
```

4.0 7.0 185000.0

4.0

Micro electronic

4

```
3
                                  4.0
                           {\tt NaN}
                                      8.0
                                            180000.0
                                                                    5.0
       4
                                  4.0
                                       7.0
              Micro electronic
                                            185000.0
                                                                    4.0
       49995
                                  2.0 3.0
                                            180000.0
                                                                    5.0
                           NaN
                                                                    4.0
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                             ΑI
                                  4.0 8.0
                                            200000.0
                                  2.0 4.0 170000.0
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       49997
                      Robotics
                                                                    4.0
       49998
                           NaN
                                  4.0 7.0
                                            130000.0
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                      Robotics
                                  1.0
                                      1.0
                                            185000.0
                                                                    4.0
              total program fee paid fee
                                               CGPA
       0
                      1360000.0
                                     True
                                           8.002752
       1
                      1520000.0
                                     True
                                           5.379498
       2
                                    False
                                           9.273052
                      1600000.0
       3
                      1800000.0
                                     True 7.998828
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                      1480000.0
                                     True 8.952546
       49995
                      1800000.0
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       49996
                      1600000.0
                                     True 8.578161
       49997
                                     True 7.504524
                      1360000.0
       49998
                      1040000.0
                                     True 8.774756
       49999
                      1480000.0
                                     True 9.961632
       [50000 rows x 13 columns]
[379]: # inserting grade col
       for i in myData.index:
           if(myData.at[i, "CGPA"] > 9):
               myData.at[i, "grade"] = "A"
           elif(myData.at[i, "CGPA"] > 8):
               myData.at[i, "grade"] = "A-"
           elif(myData.at[i, "CGPA"] > 7):
               myData.at[i, "grade"] = "B"
           elif(myData.at[i, "CGPA"] > 6):
               myData.at[i, "grade"] = "B-"
           else:
               myData.at[i, "grade"] = "C"
```

1

2

cyber

cyber

1.0

2.0 3.0 190000.0

200000.0

2.0

4.0

4.0

```
[379]:
              rollNo
                          first name last name
                                                            fullName
                                                                       branch \
       0
              100000
                            aaric a
                                                      aaric a aaron
                                                                          ECE
                                          aaron
       1
              100001
                        dominique j
                                                  dominique j aaron
                                                                           COE
                                          aaron
```

count = count + 1

myData

```
2
       100002
                  fredrick r
                                            fredrick r aaron
                                                                   CSE
                                  aaron
3
       100003
                                                               MEC-MBA
                     jarvis
                                  aaron
                                               jarvis
                                                       aaron
4
       100004
                    lorenzo
                                   aaron
                                              lorenzo
                                                        aaron
                                                                   ENC
49995
       149995
                                 hanton
                                           leonard jrhanton MEC-MBA
                  leonard jr
49996
       149996
                       john
                                  clark
                                                 john clark
                                                                   CSE
49997
       149997
                                johnson
                                             demoy p johnson
                                                                   ECE
                     demoy p
                                             shedrick s jean
                                                                   MEC
49998
       149998
                  shedrick s
                                    jean
                                            dennis 1 mustafa
49999
      149999
                    dennis 1
                                mustafa
                                                                   ENC
                                                program duration
                  major
                          year
                                sem
0
               Robotics
                           3.0
                                6.0
                                     170000.0
                                                              4.0
                                                              4.0
1
                  cyber
                           2.0
                                3.0
                                     190000.0
2
                                                              4.0
                   cyber
                           1.0
                                2.0
                                     200000.0
3
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                                8.0
                                                              5.0
                     {\tt NaN}
                                      180000.0
4
                           4.0 7.0
                                                              4.0
       Micro electronic
                                      185000.0
49995
                           2.0
                                3.0
                                     180000.0
                                                              5.0
                     NaN
                           4.0 8.0 200000.0
                                                              4.0
49996
                      ΑI
49997
               Robotics
                           2.0
                                4.0
                                     170000.0
                                                              4.0
49998
                           4.0 7.0
                                                              4.0
                     NaN
                                     130000.0
49999
                           1.0
                               1.0
                                      185000.0
                                                              4.0
               Robotics
       total program fee paid fee
                                         CGPA grade
0
               1360000.0
                              True
                                    8.002752
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1
               1520000.0
                              True
                                    5.379498
                                                  C
                             False 9.273052
               1600000.0
                                                  Α
3
               1800000.0
                              True 7.998828
                                                  В
4
               1480000.0
                              True 8.952546
49995
               1800000.0
                              True 8.395532
                                                 A –
                              True 8.578161
49996
               1600000.0
                                                 A-
                              True 7.504524
                                                  В
49997
               1360000.0
49998
               1040000.0
                              True 8.774756
                                                 A-
49999
               1480000.0
                              True 9.961632
                                                  Α
```

[50000 rows x 14 columns]

```
[381]:
              rollNo
                          first name last name
                                                             fullName
                                                                         branch
               100000
       0
                             aaric a
                                           aaron
                                                        aaric a aaron
                                                                            ECE
                        dominique j
       1
               100001
                                                    dominique j aaron
                                                                             COE
                                           aaron
       2
               100002
                          fredrick r
                                                     fredrick r aaron
                                                                             CSE
                                           aaron
       3
               100003
                             jarvis
                                           aaron
                                                        jarvis
                                                                aaron
                                                                       MEC-MBA
       4
               100004
                                                       lorenzo
                                                                            ENC
                            lorenzo
                                           aaron
                                                                aaron
                         leonard jr
       49995
               149995
                                          hanton
                                                    leonard jrhanton
                                                                        MEC-MBA
       49996
                                                                             CSE
              149996
                               john
                                           clark
                                                          john clark
                                                                            ECE
       49997
               149997
                             demoy p
                                         johnson
                                                      demoy p johnson
       49998
                                                                            MEC
               149998
                          shedrick s
                                                      shedrick s jean
                                            jean
       49999
              149999
                                         mustafa
                                                     dennis 1 mustafa
                                                                            ENC
                            dennis 1
                                                         program duration
                          major
                                  year
                                         sem
       0
                       Robotics
                                   3.0
                                         6.0
                                              170000.0
                                                                       4.0
                                                                       4.0
       1
                           cyber
                                   2.0
                                        3.0
                                              190000.0
       2
                           cyber
                                   1.0
                                        2.0
                                              200000.0
                                                                       4.0
       3
                                   4.0
                                        8.0
                                              180000.0
                                                                       5.0
                             NaN
       4
              Micro electronic
                                   4.0
                                        7.0
                                              185000.0
                                                                       4.0
                             {\tt NaN}
                                        3.0
       49995
                                   2.0
                                              180000.0
                                                                       5.0
                                   4.0
                                        8.0
                                                                       4.0
       49996
                              AΙ
                                              200000.0
                                   2.0
       49997
                       Robotics
                                        4.0
                                              170000.0
                                                                       4.0
       49998
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                                                                       4.0
                             NaN
                                        7.0
                                              130000.0
       49999
                       Robotics
                                   1.0
                                         1.0
                                              185000.0
                                                                       4.0
               total program fee paid fee
                                                 CGPA grade
                                             8.002752
       0
                       1360000.0
                                      True
       1
                       1520000.0
                                      True
                                             5.379498
                                                           k
       2
                       1600000.0
                                     False
                                             9.273052
                                                           g
       3
                       1800000.0
                                      True
                                             7.998828
                                                           1
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                       1480000.0
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                                      True 8.395532
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                                      True 8.578161
                       1600000.0
       49997
                       1360000.0
                                      True
                                             7.504524
                                                           b
                                      True
                                                           1
       49998
                       1040000.0
                                             8.774756
       49999
                       1480000.0
                                      True 9.961632
                                                           С
       [50000 rows x 14 columns]
[382]: # exporting to csv
       myData.to_csv("studentsData.csv")
```

[]: