```
Data Manipulation
         Aim: To perform Data Manipulation and using Pandas
 In [2]:
           #Name : Rajshri Kirandas Satpute
           #Roll No. : 55
           #Year : 3rd year
           #Section : B
           #Date : 02/08/2023
 In [3]:
           import pandas as pd
           import os
           os.getcwd()
          'C:\\Users\\fatin'
 Out[5]:
 In [6]:
           os.chdir('C:\\Users\\fatin\\OneDrive\\Desktop')
           data= pd.read_csv('diabetes.csv')
 In [8]:
           data.head(10)
             Pregnancies Glucose BloodPressure SkinThickness Insulin BMI DiabetesPedigreeFunction Age Outcome
 Out[8]:
                            148
                                          72
                                                               0 33.6
                     6
                                                                                       0.627
                                                                                              50
                                                                                                       1
                                                              0 26.6
          1
                     1
                            85
                                          66
                                                       29
                                                                                       0.351
                                                                                             31
                                                                                                       0
                                                               0 23.3
                                                                                             32
          2
                     8
                            183
                                          64
                                                        0
                                                                                       0.672
          3
                                          66
                     1
                            89
                                                       23
                                                                                             21
                                                                                                       0
                                                              94 28.1
                                                                                       0.167
                                          40
          4
                     0
                            137
                                                       35
                                                             168 43.1
                                                                                       2.288
                                                                                             33
                     5
                            116
                                          74
                                                        0
                                                               0 25.6
                                                                                       0.201 30
                                                                                                       0
                     3
                            78
                                          50
                                                       32
                                                              88 31.0
                                                                                       0.248
                                                                                             26
                    10
                            115
                                          0
                                                               0 35.3
                                                                                       0.134
                                                                                             29
                     2
                                          70
                            197
                                                       45
                                                             543 30.5
                                                                                       0.158
                                                                                             53
                     8
                                          96
                            125
                                                               0.0
                                                                                       0.232 54
                                                                                                       1
 In [9]:
           data.tail()
              Pregnancies Glucose BloodPressure SkinThickness Insulin BMI DiabetesPedigreeFunction Age Outcome
 Out[9]:
          763
                                                                                               63
                                                                                                         0
                      10
                             101
                                            76
                                                         48
                                                               180 32.9
                                                                                         0.171
                       2
                                            70
                                                         27
                                                                                                         0
          764
                              122
                                                                0 36.8
                                                                                         0.340
                                                                                               27
          765
                       5
                              121
                                            72
                                                         23
                                                               112 26.2
                                                                                               30
                                                                                                         0
                                                                                         0.245
          766
                              126
                                                                0 30.1
                                                                                         0.349
                                                                                               47
                                                                                                         1
          767
                       1
                              93
                                            70
                                                         31
                                                                                         0.315 23
                                                                                                         0
                                                                0 30.4
In [10]:
           data.shape
Out[10]: (768, 9)
In [11]:
           data.size
Out[11]:
In [12]:
           data.ndim
Out[12]: 2
In [13]:
           data.columns
          Index(['Pregnancies', 'Glucose', 'BloodPressure', 'SkinThickness', 'Insulin',
Out[13]:
                  'BMI', 'DiabetesPedigreeFunction', 'Age', 'Outcome'],
                dtype='object')
In [14]:
           data.head()
Out[14]:
            Pregnancies Glucose BloodPressure SkinThickness Insulin BMI DiabetesPedigreeFunction Age Outcome
          0
                            148
                                          72
                                                               0 33.6
                                                                                       0.627
                                                                                              50
                                                                                                       1
          1
                     1
                            85
                                          66
                                                       29
                                                               0 26.6
                                                                                       0.351
                                                                                             31
                                                                                                       0
          2
                     8
                            183
                                          64
                                                        0
                                                               0 23.3
                                                                                       0.672
                                                                                             32
                     1
                            89
                                          66
                                                       23
                                                              94 28.1
                                                                                       0.167
                                                                                             21
                                                                                                       0
                      0
                            137
                                          40
                                                       35
                                                             168 43.1
                                                                                       2.288
                                                                                             33
                                                                                                       1
In [15]:
           data.drop(labels="Age",axis=1)
Out[15]:
              Pregnancies Glucose BloodPressure SkinThickness Insulin BMI DiabetesPedigreeFunction Outcome
                                            72
                       6
                             148
                                                         35
                                                                0 33.6
                                                                                         0.627
                                                                                                    1
                                                         29
                              85
                                            66
                                                                                         0.351
                                                                                                    0
                       1
                                                                0 26.6
            2
                       8
                                                         0
                              183
                                            64
                                                                0 23.3
                                                                                         0.672
                                                                                                    1
            3
                       1
                              89
                                            66
                                                         23
                                                               94 28.1
                                                                                         0.167
                       0
                              137
                                            40
                                                         35
                                                                                         2.288
                                                               168 43.1
                                            76
                                                         48
          763
                      10
                              101
                                                               180 32.9
                                                                                         0.171
                                                                                                    0
          764
                       2
                             122
                                            70
                                                         27
                                                                                         0.340
                                                                                                    0
                                                                0 36.8
          765
                       5
                             121
                                            72
                                                         23
                                                               112 26.2
                                                                                         0.245
                                                                                                    0
                              126
                                            60
                                                         0
                                                                                         0.349
                                                                                                    1
          766
                                                                0 30.1
                                            70
                                                                                                    0
          767
                              93
                                                                0 30.4
                                                                                         0.315
         768 rows × 8 columns
In [16]:
           data.drop(labels=["Age", "Glucose"], axis=1)
Out[16]:
              Pregnancies BloodPressure SkinThickness Insulin BMI DiabetesPedigreeFunction Outcome
            0
                       6
                                    72
                                                        0 33.6
                                                                                0.627
                                                                                            1
                                                                                0.351
            1
                                    66
                                                        0 26.6
            2
                       8
                                    64
                                                        0 23.3
                                                                                0.672
            3
                       1
                                    66
                                                 23
                                                       94 28.1
                                                                                0.167
                       0
                                    40
            4
                                                       168 43.1
                                                                                2.288
                      10
                                    76
                                                       180 32.9
                                                                                0.171
          763
          764
                                    70
                                                                                0.340
                                                                                            0
                                                        0 36.8
          765
                                    72
                                                       112 26.2
                                                                                0.245
                                    60
                                                                                0.349
          766
                                                        0 30.1
                       1
                                    70
          767
                                                        0 30.4
                                                                                0.315
         768 rows × 7 columns
In [17]:
           data.head(10)
                                                                                             Age Outcome
```

Out[17]:	Pregnancies	Glucose	BloodPressure	SkinThickness	Insulin	вмі	DiabetesPedigreeFunction

] :		Pregnancies	Glucose	Dioouriessure	Skill Hillickiless	msum	DIVII	DiabetesPedigreeFunction	Age	Outcome
	0	6	148	72	35	0	33.6	0.627	50	1
	1	1	85	66	29	0	26.6	0.351	31	0
	2	8	183	64	0	0	23.3	0.672	32	1
	3	1	89	66	23	94	28.1	0.167	21	0
	4	0	137	40	35	168	43.1	2.288	33	1
	5	5	116	74	0	0	25.6	0.201	30	0
	6	3	78	50	32	88	31.0	0.248	26	1
	7	10	115	0	0	0	35.3	0.134	29	0
	8	2	197	70	45	543	30.5	0.158	53	1
	9	8	125	96	0	0	0.0	0.232	54	1

In [19]: data.drop(labels=[2,3],axis=0)

Out[19]:		Pregnancies	Glucose	BloodPressure	SkinThickness	Insulin	вмі	DiabetesPedigreeFunction	Age	Outcome
-	0	6	148	72	35	0	33.6	0.627	50	1
	1	1	85	66	29	0	26.6	0.351	31	0
	4	0	137	40	35	168	43.1	2.288	33	1
	5	5	116	74	0	0	25.6	0.201	30	0
	6	3	78	50	32	88	31.0	0.248	26	1
	763	10	101	76	48	180	32.9	0.171	63	0
	764	2	122	70	27	0	36.8	0.340	27	0
	765	5	121	72	23	112	26.2	0.245	30	0
	766	1	126	60	0	0	30.1	0.349	47	1
	767	1	93	70	31	0	30.4	0.315	23	0
	766 rows × 0 columns									

766 rows × 9 columns