

In [1]: #EXP:1

In [2]: #Aim:To Perform operation of data acquisition

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#Date:25-07-2025

In [4]: #importing the basic library
import pandas as pd

In [6]: import os

In [7]: os.getcwd()

Out[7]: 'C:\\Users\\LENOVO'

In [8]: os.chdir("C:\\Users\\LENOVO\\Desktop")

In [9]: data=pd.read_csv("C:\\Users\\LENOVO\\Desktop\\diabetes.csv")

In [10]: data.head(20)

Out[10]:

	Pregnancies	Glucose	BloodPressure	SkinThickness	Insulin	BMI	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
10	4	110	92	0	0	37.6	0.191	30	0
11	10	168	74	0	0	38.0	0.537	34	1
12	10	139	80	0	0	27.1	1.441	57	0
13	1	189	60	23	846	30.1	0.398	59	1
14	5	166	72	19	175	25.8	0.587	51	1
15	7	100	0	0	0	30.0	0.484	32	1
16	0	118	84	47	230	45.8	0.551	31	1
17	7	107	74	0	0	29.6	0.254	31	1
18	1	103	30	38	83	43.3	0.183	33	0
19	1	115	70	30	96	34.6	0.529	32	1

In [11]: data.tail()

Out[11]:

	Pregnancies	Glucose	BloodPressure	SkinThickness	Insulin	BMI	DiabetesPedigreeFunction	Age	Outcome
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

In [12]: data.describe()

Out[12]:

	Pregnancies	Glucose	BloodPressure	SkinThickness	Insulin	BMI	DiabetesPedigreeFunction	Age	Outcome
count	768.000000	768.000000	768.000000	768.000000	768.000000	768.000000	768.000000	768.000000	768
mean	3.845052	120.894531	69.105469	20.536458	79.799479	31.992578	0.471876	33.240885	0
std	3.369578	31.972618	19.355807	15.952218	115.244002	7.884160	0.331329	11.760232	0
min	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.078000	21.000000	0
25%	1.000000	99.000000	62.000000	0.000000	0.000000	27.300000	0.243750	24.000000	0
50%	3.000000	117.000000	72.000000	23.000000	30.500000	32.000000	0.372500	29.000000	0
75%	6.000000	140.250000	80.000000	32.000000	127.250000	36.600000	0.626250	41.000000	1
max	17.000000	199.000000	122.000000	99.000000	846.000000	67.100000	2.420000	81.000000	1

In [13]:

data.shape

Out[13]:

(768, 9)

In [14]:

data.size

Out[14]:

6912

In [15]:

data.ndim

Out[15]:

2

In [16]:

data.columns

Out[16]:

Index(['Pregnancies', 'Glucose', 'BloodPressure', 'SkinThickness', 'Insulin', 'BMI', 'DiabetesPedigreeFunction', 'Age', 'Outcome'], dtype='object')

In [17]:

data.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 768 entries, 0 to 767
Data columns (total 9 columns):
Column Non-Null Count Dtype
--- ---
0 Pregnancies 768 non-null int64
1 Glucose 768 non-null int64
2 BloodPressure 768 non-null int64
3 SkinThickness 768 non-null int64
4 Insulin 768 non-null int64
5 BMI 768 non-null float64
6 DiabetesPedigreeFunction 768 non-null float64
7 Age 768 non-null int64
8 Outcome 768 non-null int64
dtypes: float64(2), int64(7)
memory usage: 54.1 KB

In []: