DATA SPECIALIZATION

In [1]:
```
#Name :  Akshata P Ganjiwale
#Roll no. :21
#Section :  3C
#Date : 27/07/2024
```

In [2]:
```
#Aim: To Perform Data Specialization
```

In [3]:
```
import pandas as pd
```

In [4]:
```
import os
```

In [5]:
```
os.getcwd()
```

Out[5]:
```
'C:\\Users\\hp'
```

In [6]:
```
os.chdir("C:\\Users\\hp\\Desktop\\Data Science")
```

In [9]:
```
df=pd.read_csv("framingham.csv")
```

In [11]:
```
df.head()
```

Out[11]:

	male	age	education	currentSmoker	cigsPerDay	BPMeds	prevalentStroke	prevalentHyp
0	1	39	4.0	0	0.0	0.0	0	0
1	0	46	2.0	0	0.0	0.0	0	0
2	1	48	1.0	1	20.0	0.0	0	0
3	0	61	3.0	1	30.0	0.0	0	1
4	0	46	3.0	1	23.0	0.0	0	0

In [13]:
```
df.head(100)
```

Out[13]:
```
      male  age  education  currentSmoker  cigsPerDay  BPMeds  prevalentStroke  prevalentHy
 0       1   39        4.0              0         0.0     0.0                0
 1       0   46        2.0              0         0.0     0.0                0
 2       1   48        1.0              1        20.0     0.0                0
 3       0   61        3.0              1        30.0     0.0                0
 4       0   46        3.0              1        23.0     0.0                0
...    ...  ...        ...            ...         ...     ...              ...            .
95       0   65        3.0              0         0.0     0.0                0
96       0   63        4.0              1        20.0     0.0                0
97       0   40        2.0              0         0.0     0.0                0
98       0   56        1.0              0         0.0     0.0                0
99       0   56        1.0              1        15.0     0.0                0

100 rows × 16 columns
```

In [14]:
```
df.tail()
```

Out[14]:
```
        male  age  education  currentSmoker  cigsPerDay  BPMeds  prevalentStroke  prevalentH
4233       1   50        1.0              1         1.0     0.0                0
4234       1   51        3.0              1        43.0     0.0                0
4235       0   48        2.0              1        20.0     NaN                0
4236       0   44        1.0              1        15.0     0.0                0
4237       0   52        2.0              0         0.0     0.0                0
```

In [15]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 4238 entries, 0 to 4237
Data columns (total 16 columns):
 #   Column           Non-Null Count  Dtype  
---  ------           --------------  -----  
 0   male             4238 non-null   int64  
 1   age              4238 non-null   int64  
 2   education        4133 non-null   float64
 3   currentSmoker    4238 non-null   int64  
 4   cigsPerDay       4209 non-null   float64
 5   BPMeds           4185 non-null   float64
 6   prevalentStroke  4238 non-null   int64  
 7   prevalentHyp     4238 non-null   int64  
 8   diabetes         4238 non-null   int64  
 9   totChol          4188 non-null   float64
 10  sysBP            4238 non-null   float64
 11  diaBP            4238 non-null   float64
 12  BMI              4219 non-null   float64
 13  heartRate        4237 non-null   float64
 14  glucose          3850 non-null   float64
 15  TenYearCHD       4238 non-null   int64  
dtypes: float64(9), int64(7)
memory usage: 529.9 KB
```

In [16]:
```
df.shape
```

Out[16]:
```
(4238, 16)
```

In [19]:
```
df.size
```

Out[19]:
```
67808
```

In [20]:
```
df.ndim
```

Out[20]:
```
2
```

In [21]:
```
df.tail(10)
```

Out[21]:

	male	age	education	currentSmoker	cigsPerDay	BPMeds	prevalentStroke	prevalentI
4228	0	50	1.0	0	0.0	0.0	0	
4229	0	51	3.0	1	20.0	0.0	0	
4230	0	56	1.0	1	3.0	0.0	0	
4231	1	58	3.0	0	0.0	0.0	0	
4232	1	68	1.0	0	0.0	0.0	0	
4233	1	50	1.0	1	1.0	0.0	0	
4234	1	51	3.0	1	43.0	0.0	0	
4235	0	48	2.0	1	20.0	NaN	0	
4236	0	44	1.0	1	15.0	0.0	0	
4237	0	52	2.0	0	0.0	0.0	0	

In [22]:
```
df.describe()
```

Out[22]:

	male	age	education	currentSmoker	cigsPerDay	BPMeds	preva
count	4238.000000	4238.000000	4133.000000	4238.000000	4209.000000	4185.000000	42
mean	0.429212	49.584946	1.978950	0.494101	9.003089	0.029630	
std	0.495022	8.572160	1.019791	0.500024	11.920094	0.169584	
min	0.000000	32.000000	1.000000	0.000000	0.000000	0.000000	
25%	0.000000	42.000000	1.000000	0.000000	0.000000	0.000000	
50%	0.000000	49.000000	2.000000	0.000000	0.000000	0.000000	
75%	1.000000	56.000000	3.000000	1.000000	20.000000	0.000000	
max	1.000000	70.000000	4.000000	1.000000	70.000000	1.000000	

In [ ]:
```
```