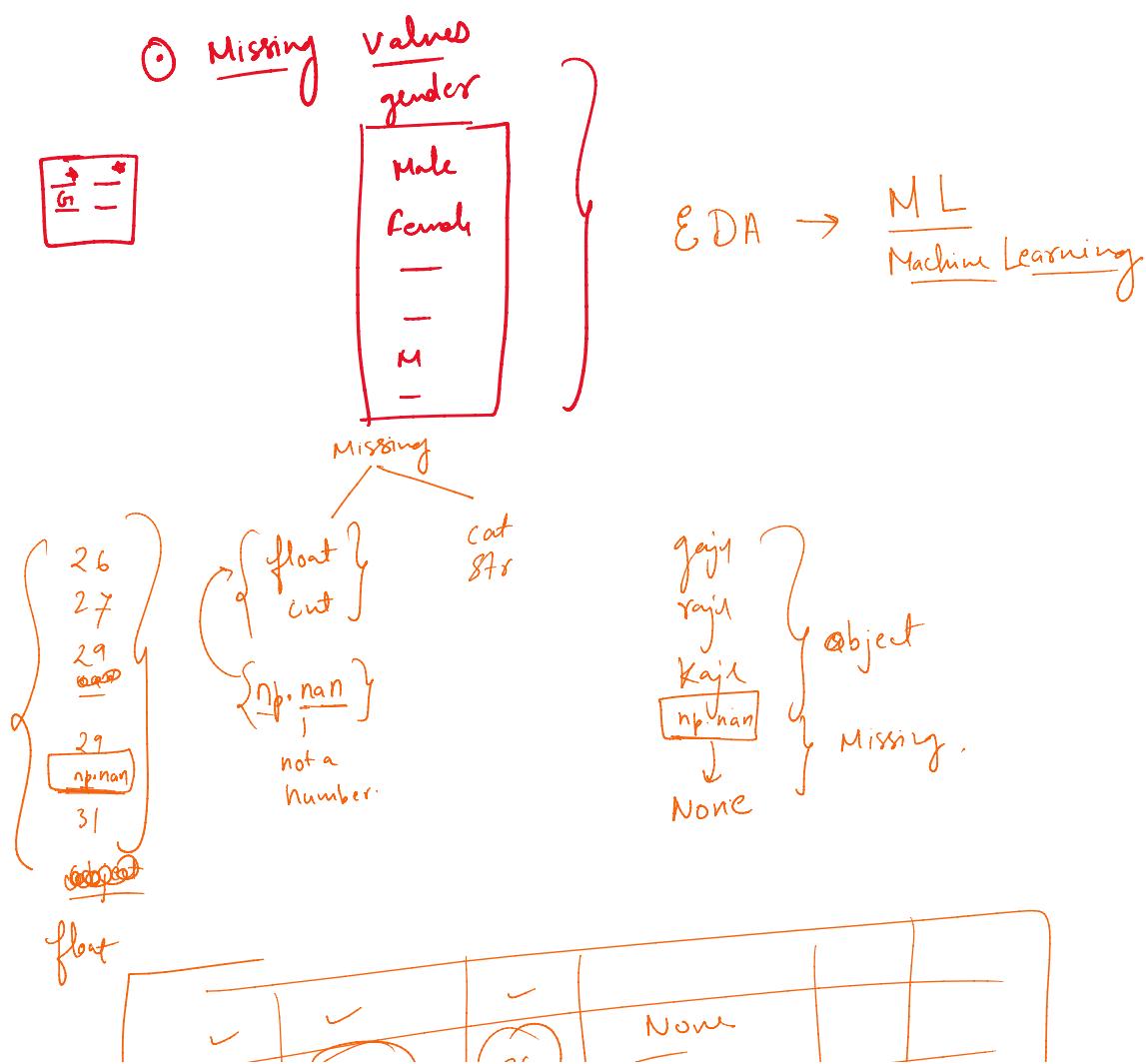
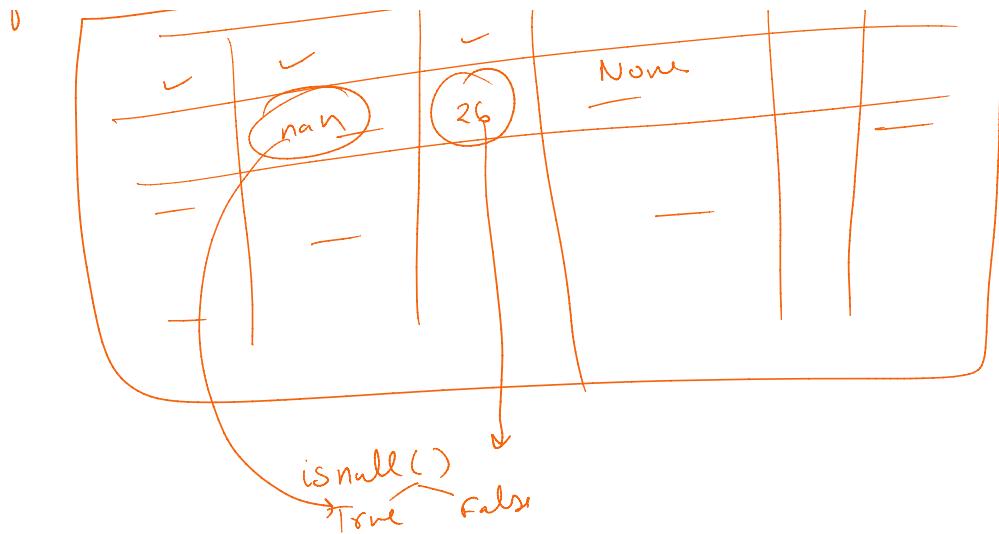


- ① Series , Dataframe
- ① column extract
- rename
- Add
- drop
- ① loc → iloc and loc
- ① sort ↔ ↔ ↔
- ① groupby → filter
- apply
- ① merge → inner, left, right outer

- ① melt, cat, Pivot table
- ① Missing values
- ① concat

easy





data object → str object

Region	Month	Electronics_Sales	Clothing_Sales
0	North	Jan	20000.0
1	South	Jan	15000.0
2	East	Jan	NaN
3	North	Feb	22000.0
4	South	Feb	24000.0
5	East	Feb	20000.0
6	North	Mar	25000.0
7	South	Mar	NaN
8	East	Mar	23000.0

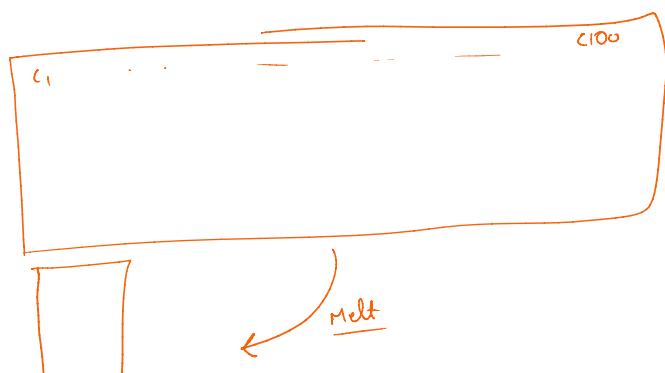
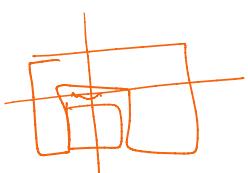
From: https://sp7how3ymr496f72rk6z22116-0-csah-pegeineusercontent.com/outputframe.html?vr=corab-external-20251403-060058_RCD0_827407071

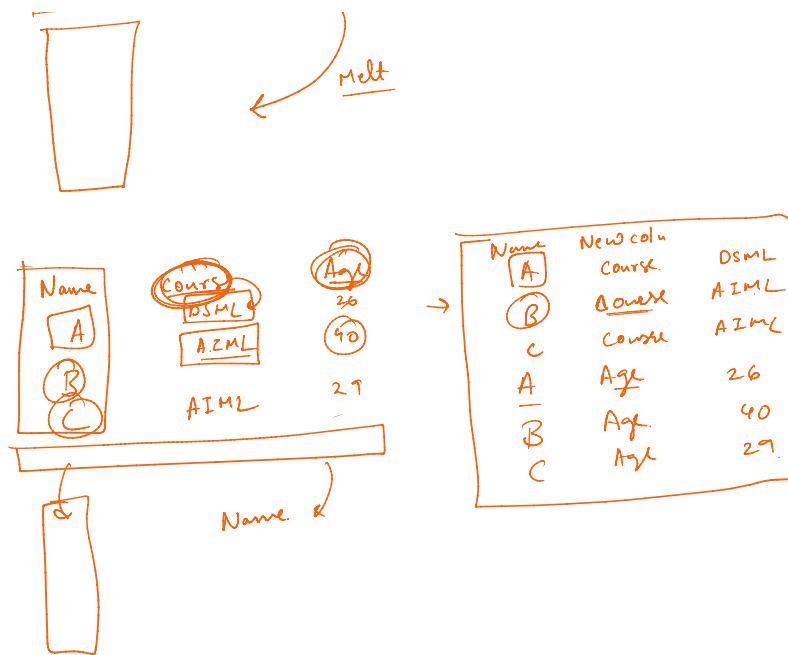
Mode X
Mean
Median

category

→ black
→ black
blue
green
→ blue
black
→ black

{ black } Mode
occurring the most





	Region	Month	Electronics_Sales	Clothing_Sales
0	North	Jan	20000	10000
1	South	Jan	15000	8000
2	East	Jan	18000	9500
3	North	Feb	22000	12000
4	South	Feb	17000	9000
5	East	Feb	20000	11000
6	North	Mar	25000	13000
7	South	Mar	18000	10000
8	East	Mar	23000	12000

① Region ② Month ③ Category ④ Value

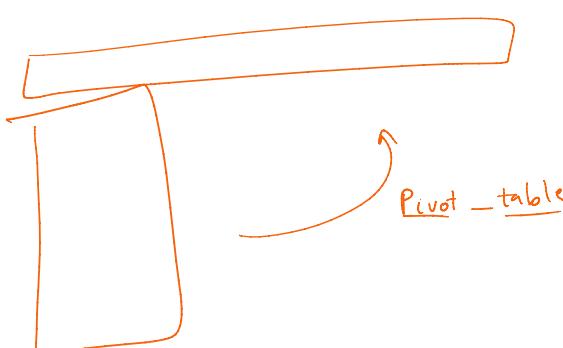
North Jan. Electronic. 20T

North Jan. Clothing 10T

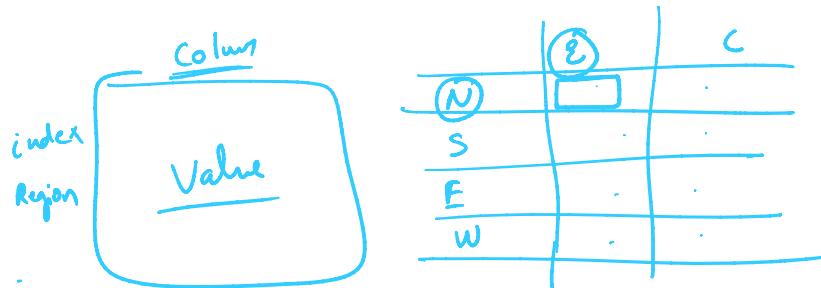
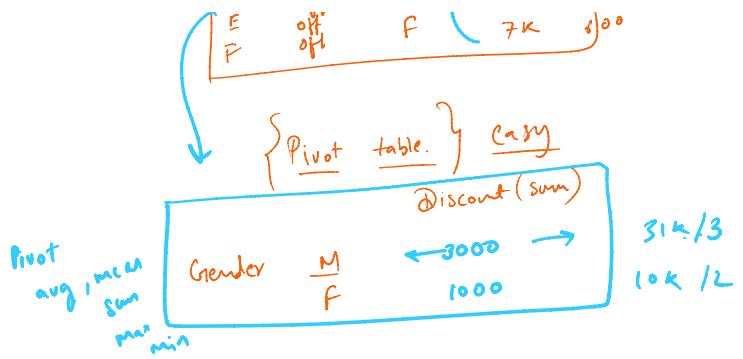
East Mar. Electronic. 3T

East Mar. Clothing 12T

Value.



Name	Category	gender	Price	Discount
A	offi	M	15K	1000
B	onli	M	12K	1200
C	offi	F	3K	900
D	offi	M	4K	700
E	offi	F	7K	800
F	offi			



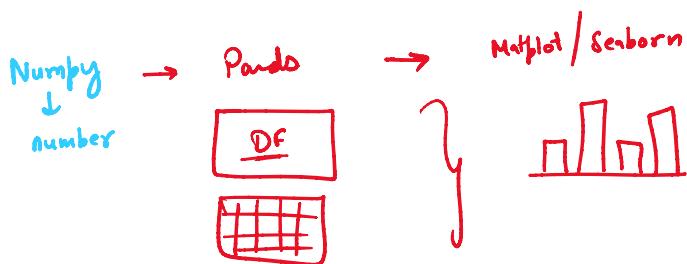
Doubt [35] }
 I C
 Index Drug.
 P1 T Max max
 D2 T Max max
 D3 T Max max

pivot-table — group by

C - Operator

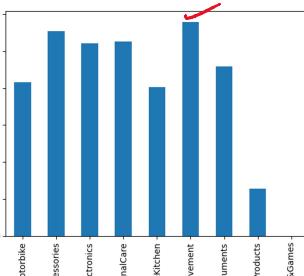
X

Visualization

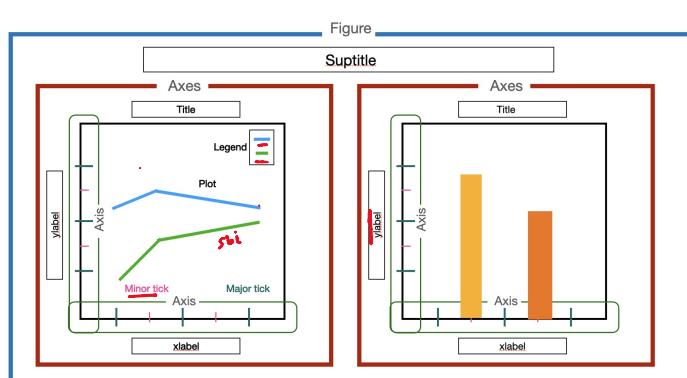


category	
Car&Motorbike	41.525000
Computers&Accessories	55.374270
Electronics	52.152439
Health&PersonalCare	52.684211
Home&Kitchen	40.241448
HomeImprovement	57.94088
MusicalInstruments	45.808298
OfficeProducts	12.771811
Toys&Games	0.000000

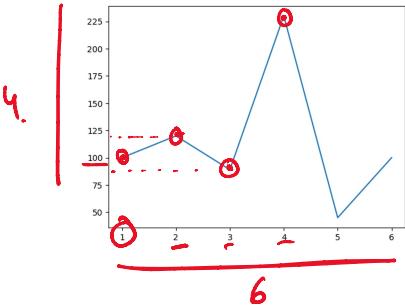
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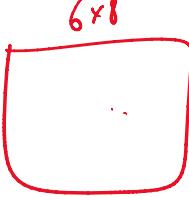
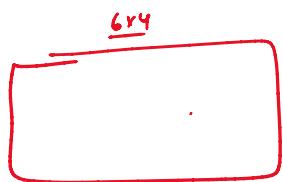
~~Red
X
AXIS~~

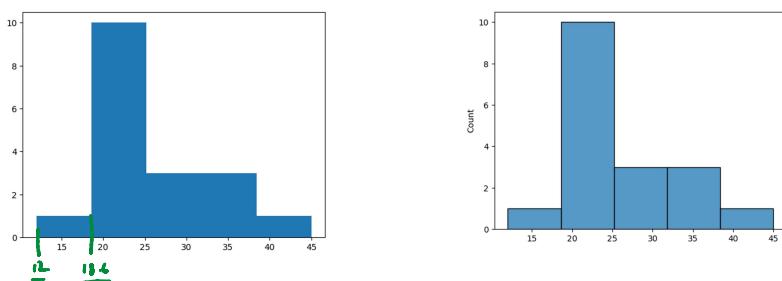
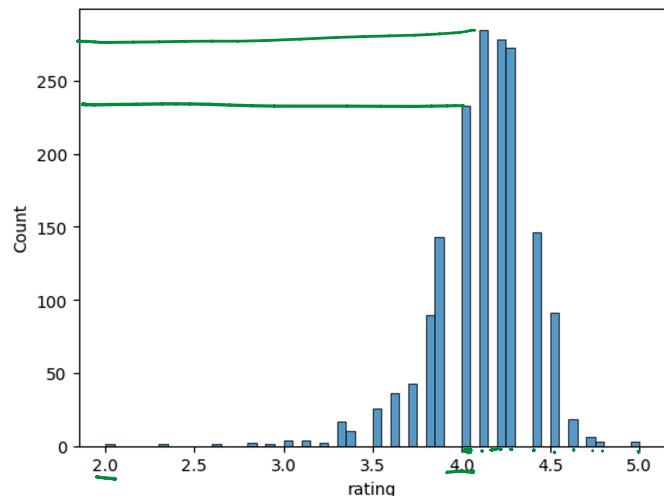
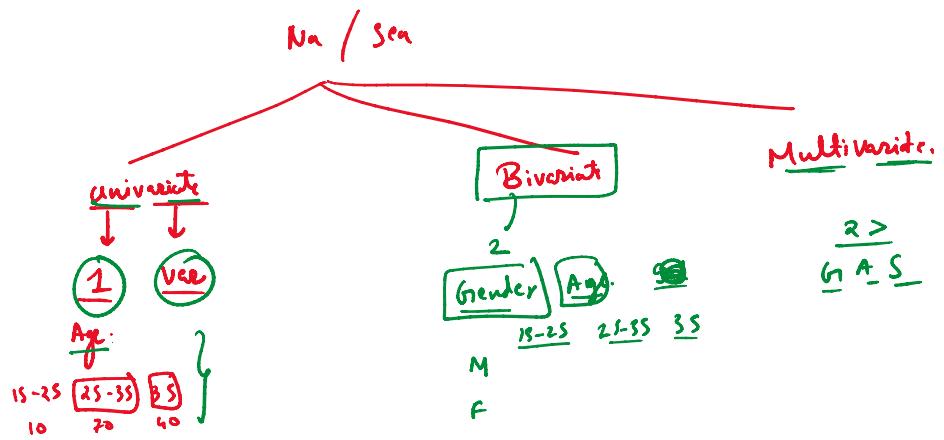


$$x = [1, 2, 3, 4, 5, 6] \\ y = [100, 120, 89, 230, 45, 100]$$



Bear





Histogram — dist

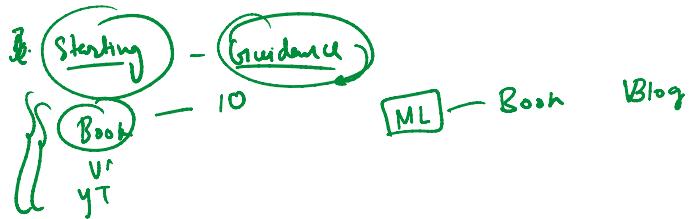
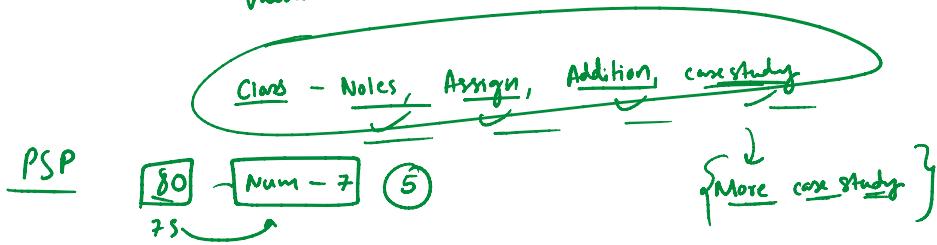
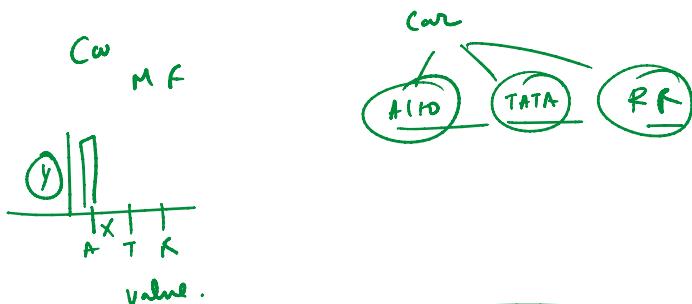
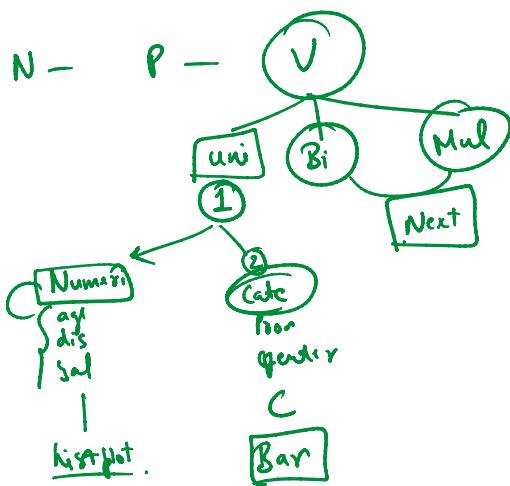
Rat
Sal
agt

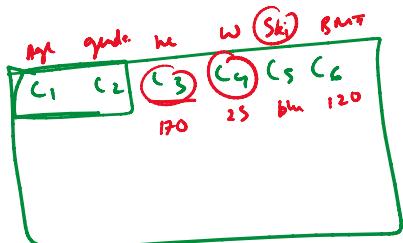
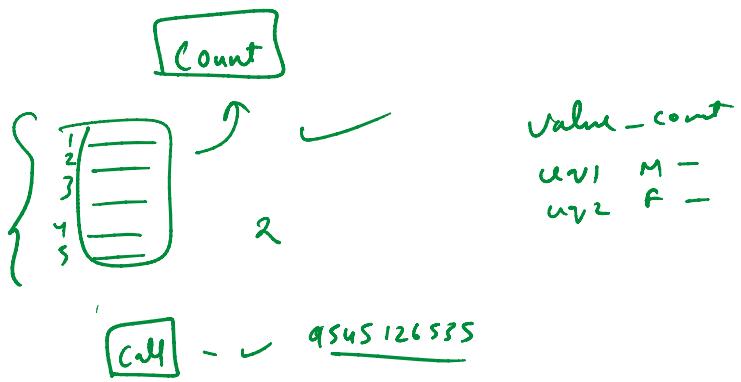
Numerical

Count Count Count

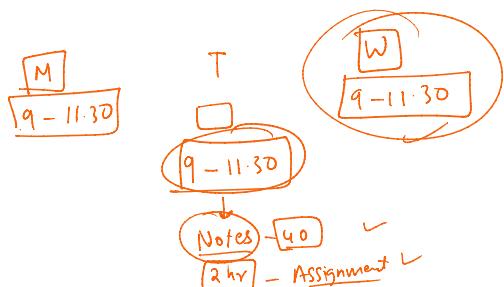
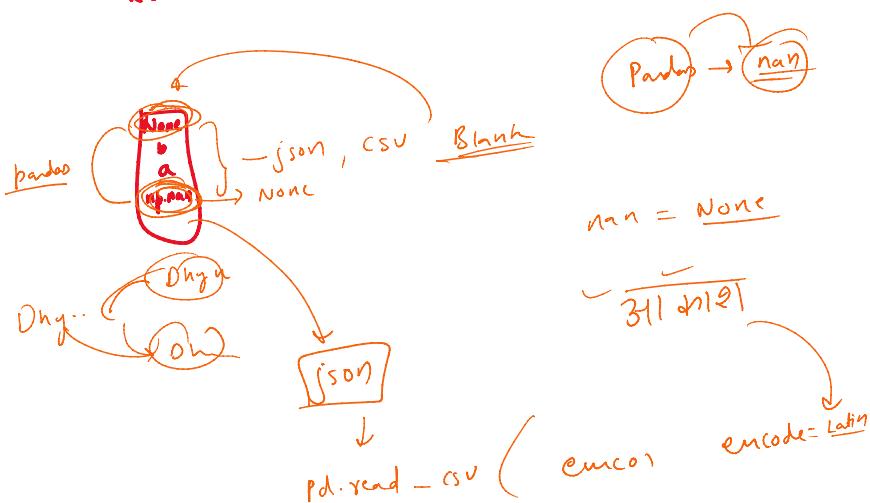
bar plot — categorical
 (x, y)
 index value counts

histplot (df[col n.])





<u>C1</u>	<u>C2</u>	<u>New Col</u>	<u>New Value</u>
28	M	height	170
26	M	weight	25
26	M	Skin	bwt.



Mis - Now
— Not

— Nat