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ID : 19-41072-2

Serial : 18

Section : R

Course : Computational Statistics and Probability

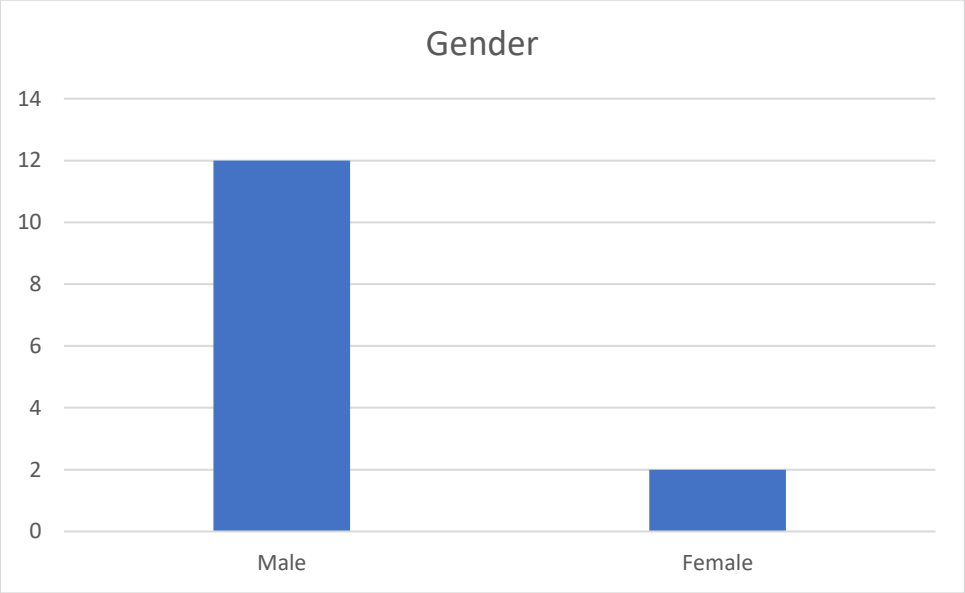
A : Classify the variables as Qualitative and Quantitative

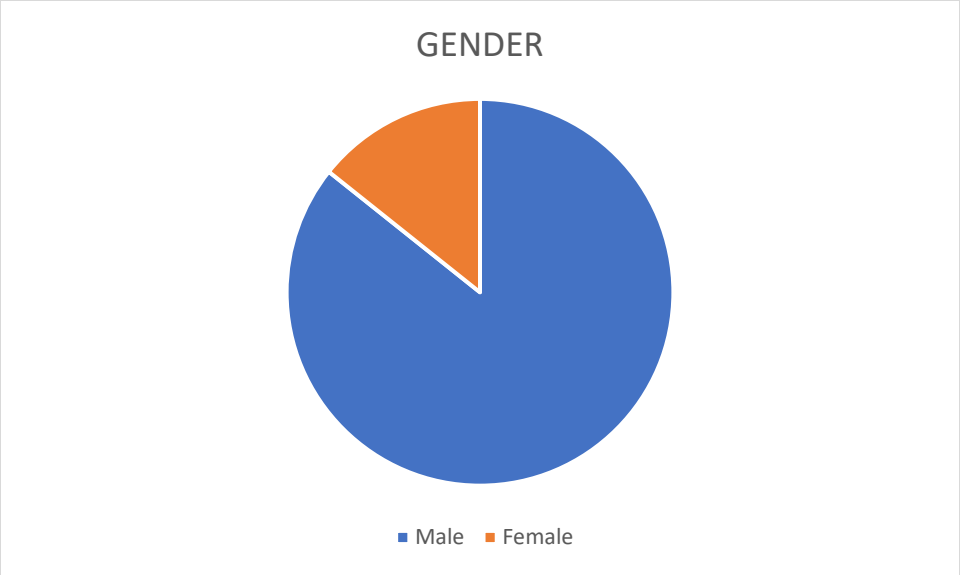
| Variable | Qualitative | Quantitative |
|---|---|---|
| STUDENT-ID | √ | |
| NAME | √ | |
| CGPA | | √ |
| BLOOD GROUP | √ | |
| RELIGION | √ | |
| AGE | | √ |
| GENDER | √ | |
| WEIGHT | | √ |
| HEIGHT | | √ |
| HOME DISTRICT | √ | |

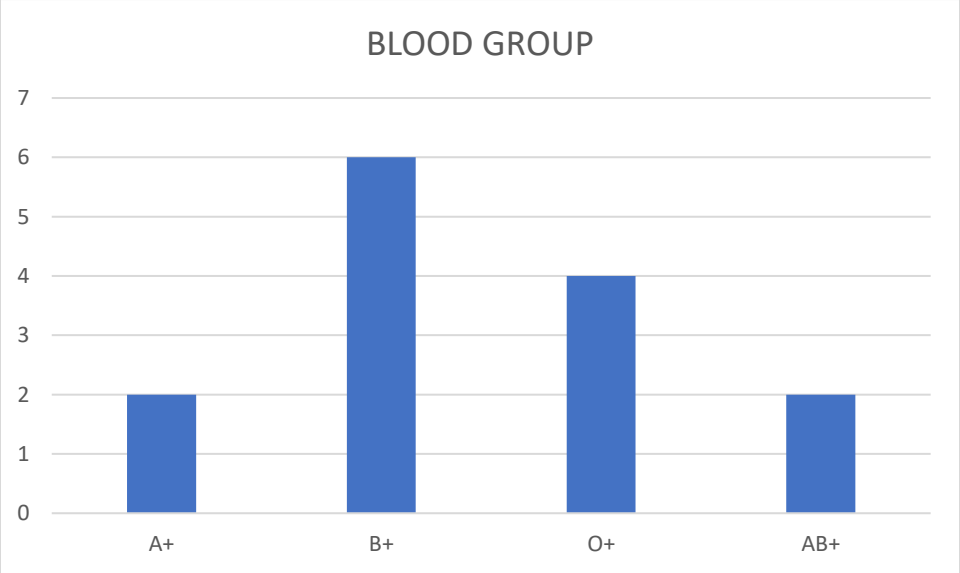
B: Classify the Quantitative variables as Discrete and Continuous.

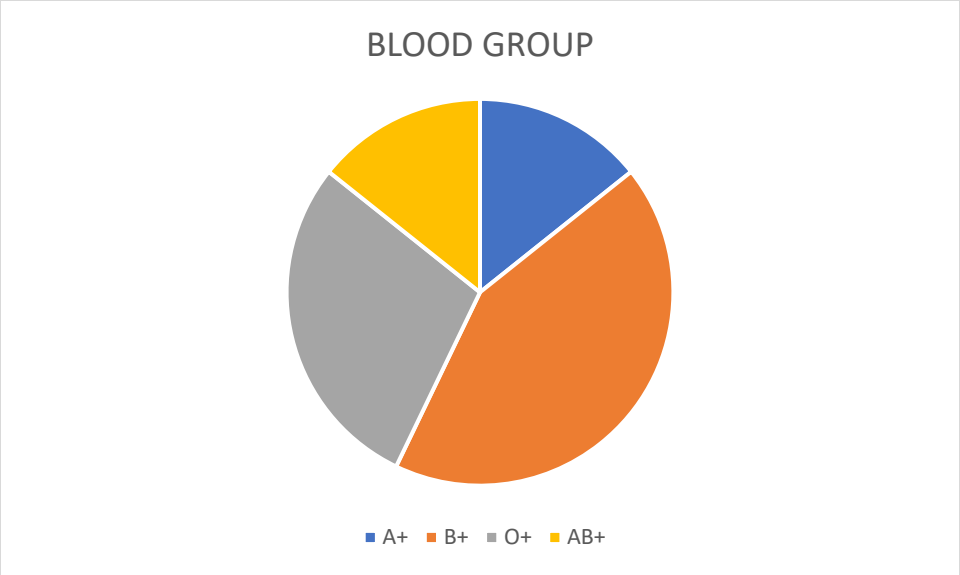
| Quantitative Variable | Discrete | Continuous |
|---|---|---|
| CGPA | | √ |
| AGE | √ | |
| WEIGHT | √ | √ |
| HEIGHT | | √ |

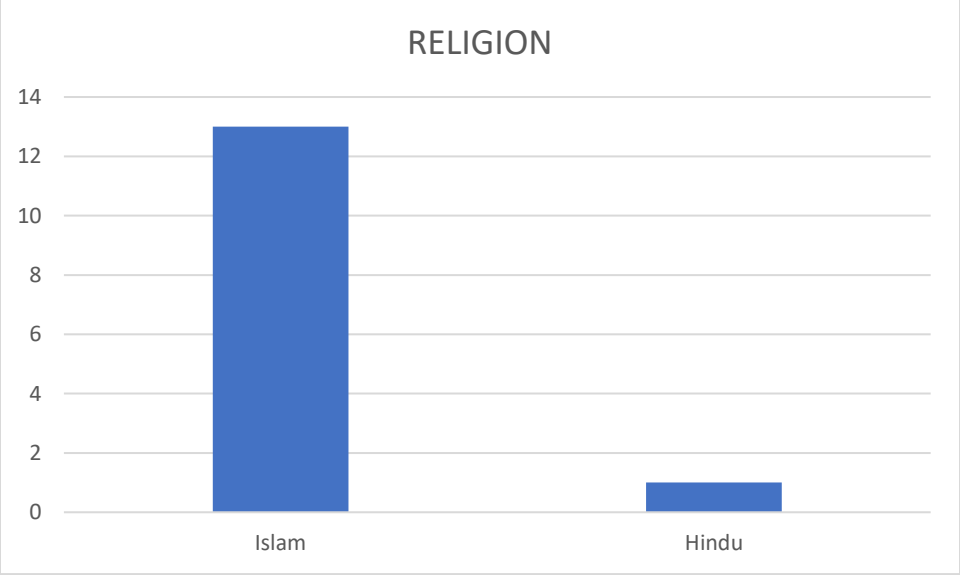
C : Bar Diagrams And Pie Diagrams for Gender, Blood Group And Religions

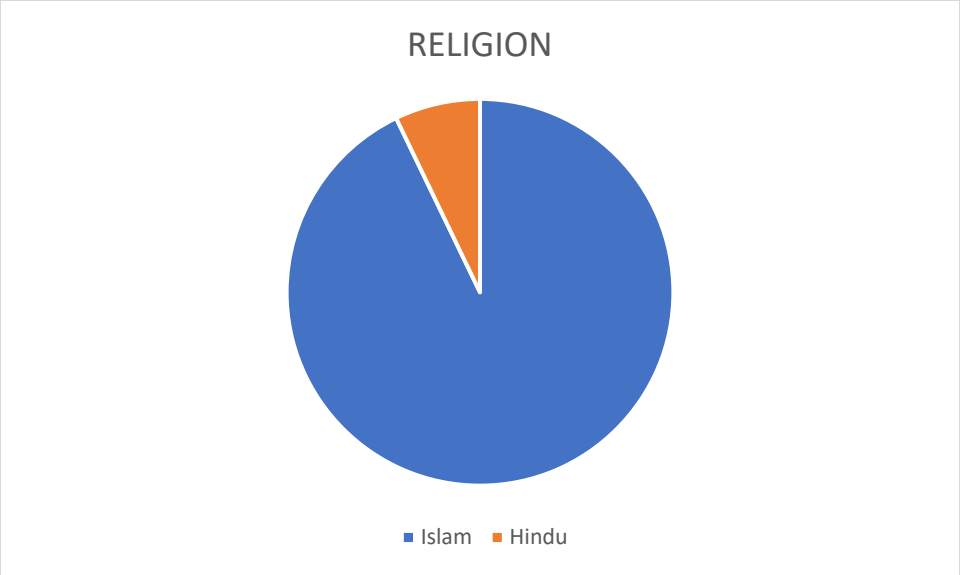



GENDER
Male
Female

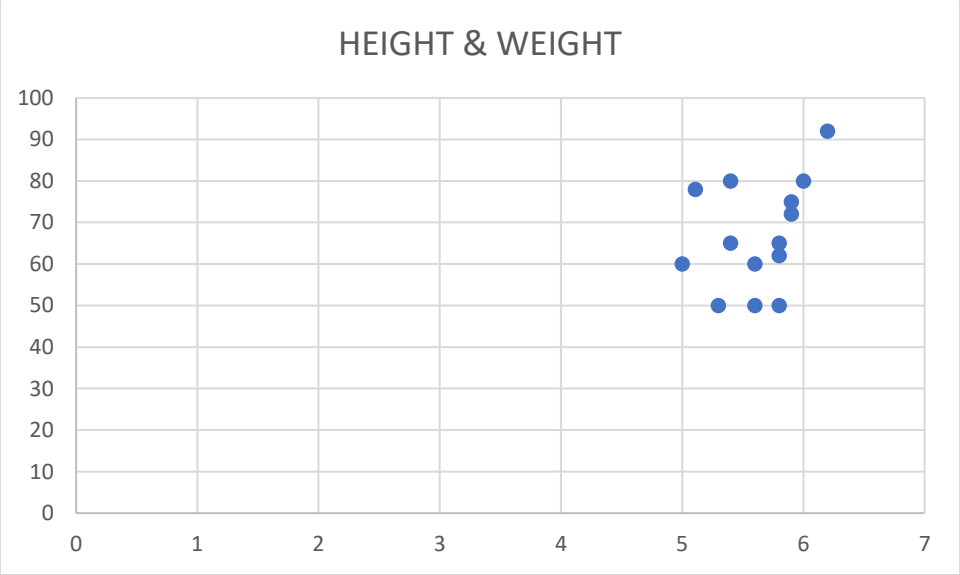

BLOOD GROUP
7
6
5
4
3
2
1
0
A+
B+
O+
AB+

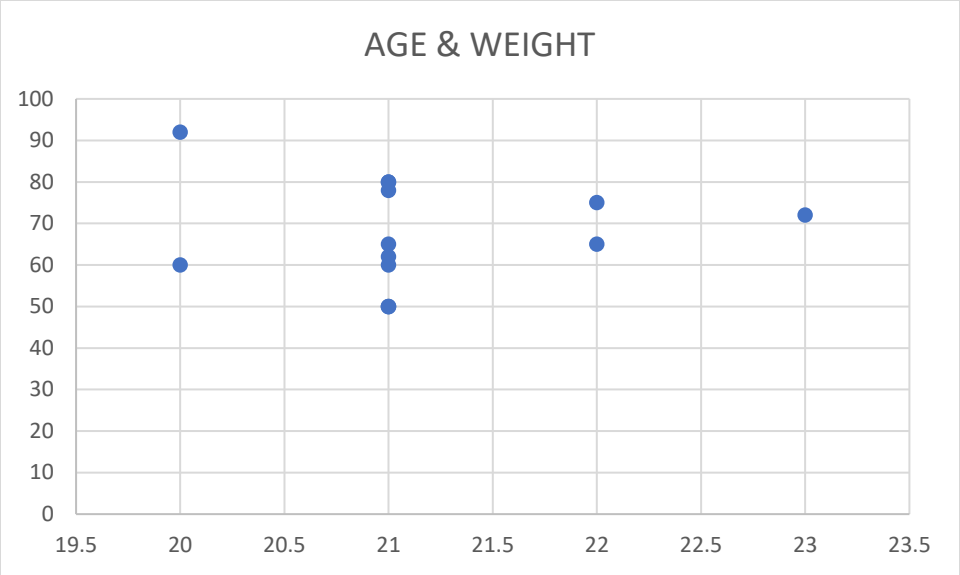

BLOOD GROUP
A+
B+
O+
AB+

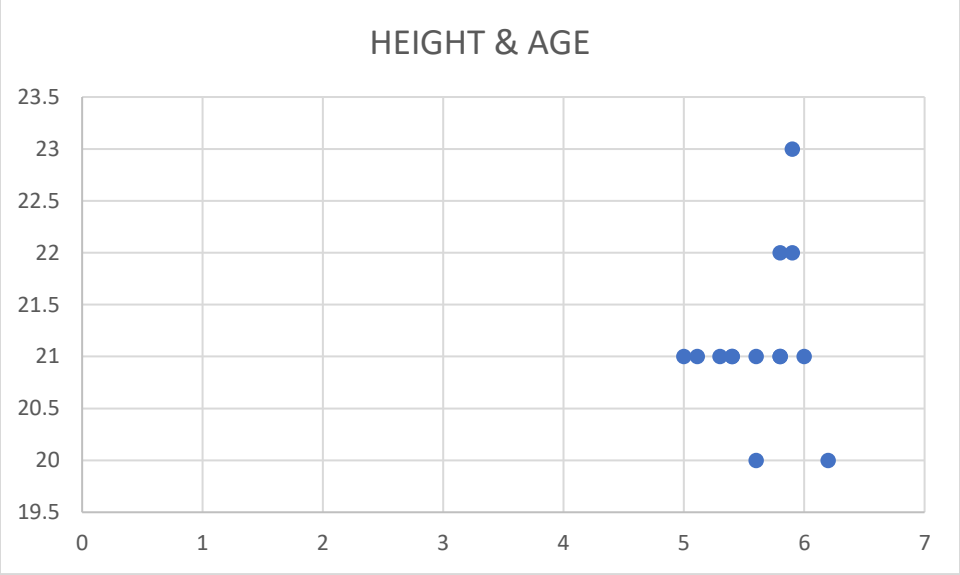

RELIGION
14
12
10
8
6
4
2
0
Islam
Hindu




D : Scatter Diagram for Height & Weight , Age & Weight , Height & Age.






E: Calculate AM, GM, HM for CGPA and show that AM>GM>HM.

AM = $\frac{3.33+3.74+3.43+3.12+2.86+3.34+3.94+3.47+3.83+3.92+3.79+3.40+3.24+3.63}{14} = \frac{49.04}{14} = 3.50$

GM = $\sqrt[14]{3.33 * 3.74 * 3.43 * 3.12 * 2.86 * 3.34 * 3.94 * 3.47 * 3.83 * 3.92 * 3.79 * 3.40 * 3.24 * 3.63}$

= $\sqrt[14]{39605668.63} = 3.49$

$$HM = \frac{14}{\frac{1}{3.33}+\frac{1}{3.74}+\frac{1}{3.43}+\frac{1}{3.12}+\frac{1}{2.86}+\frac{1}{3.34}+\frac{1}{3.94}+\frac{1}{3.47}+\frac{1}{3.83}+\frac{1}{3.92}+\frac{1}{3.79}+\frac{1}{3.40}+\frac{1}{3.24}+\frac{1}{3.63}} = 3.47$$

In this case, AM> GM> HM

[Showed]