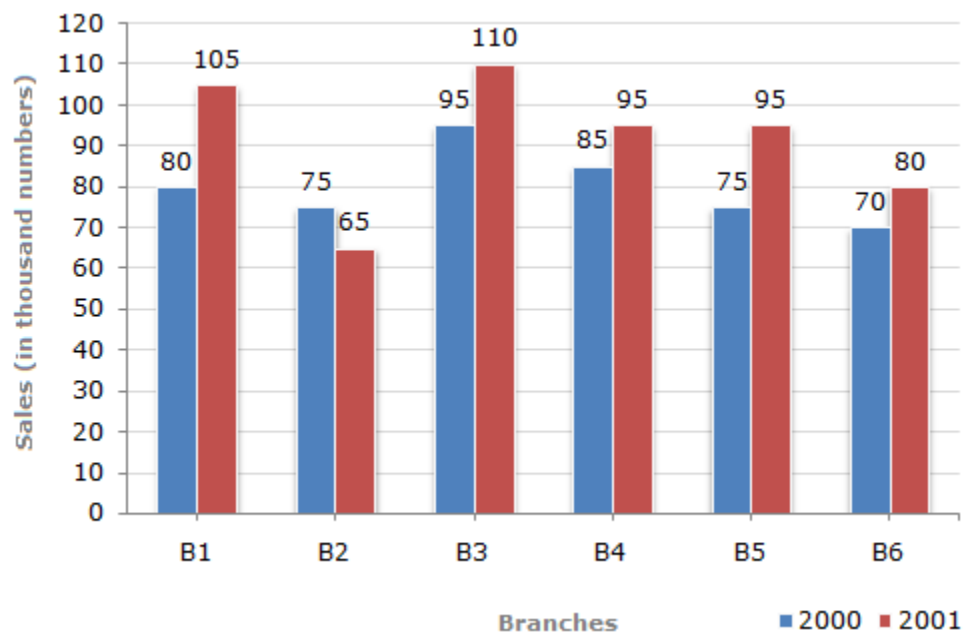# MAM II Semester - Business Statistics - Assignment on Diagramatic presentation

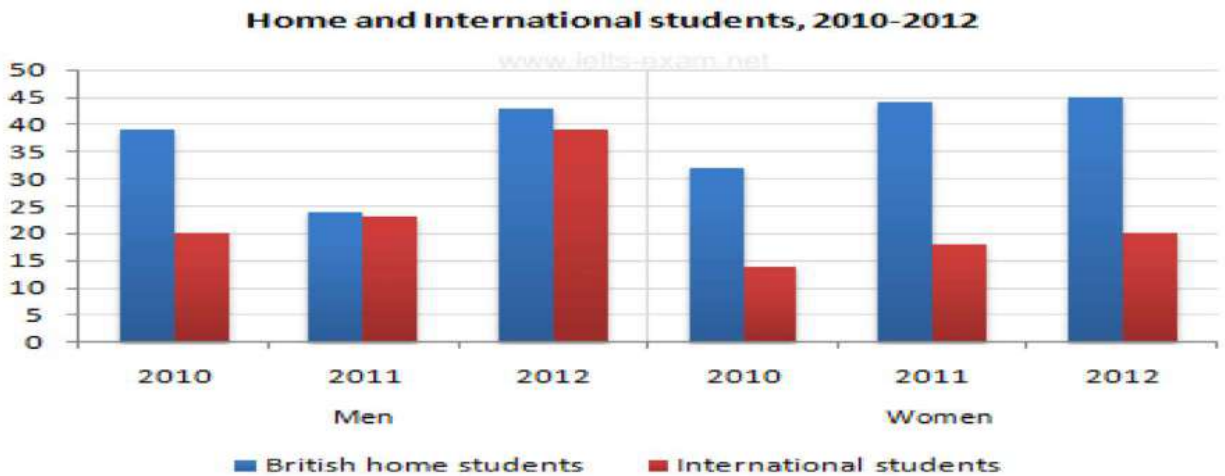1. Construct a Multiple Bar chart for the following data on sales (in '000) at diffrent branches.

Branches	Year - 2000	Year - 2001
B1	80	105
B2	75	65
B3	95	110
B4	85	95
B5	75	95
B6	70	80

2. Construct a Multiple bar chart for the following data

Year	Home students (in '000)		International students (in '000)	
	Men	Women	Men	Women
2010	39	32	20	14
2011	24	44	23	17
2012	43	45	39	20

Home and International students, 2010-2012

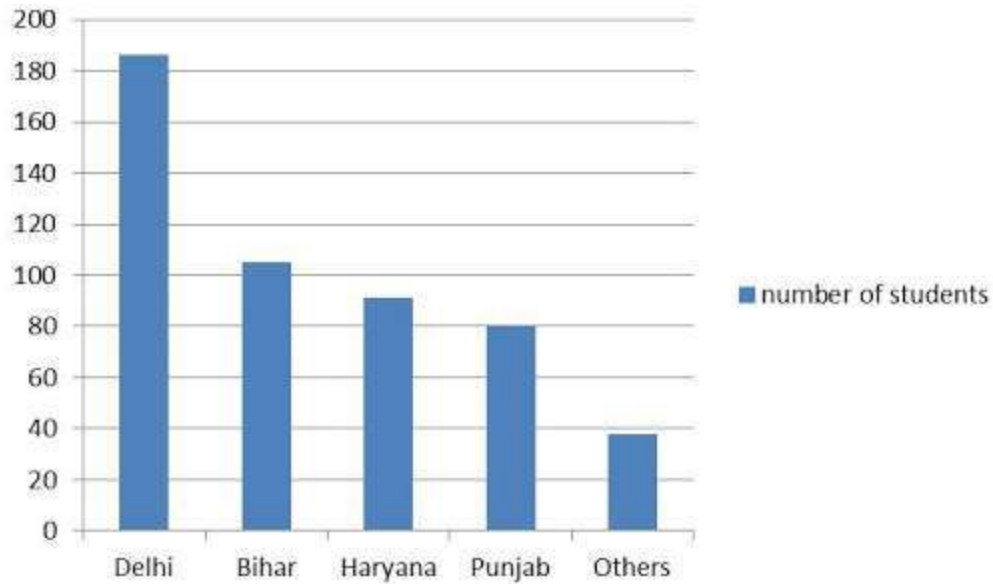|	2010	2011	2012	2010	2011	2012
	Men			Women		

■ British home students   ■ International students

Types of Charts:

(a) Simple Bar Chart,

(b) Multiple Bar Chart,

(c) Component Bar Chart,

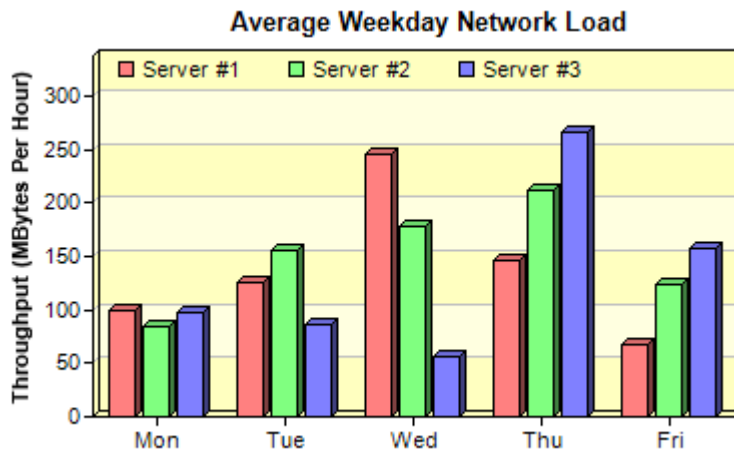(d) Percentage Component Bar Chart, and

(e) Pie Chart.

(a) Simple Bar Chart:

1. Simple bar chart consists of vertical or horizontal bars of equal width.

2. The length of the bars is taken proportionately to the magnitude of the values represented. The width of the bars has no significance.

3. Vertical bars are used to represent quantitative data or chronological data. Whereas, the horizontal bars are represented for qualitative data or geographical data.

4. If the data do not relate to time, then they should be arranged in ascending or descending order of magnitude.
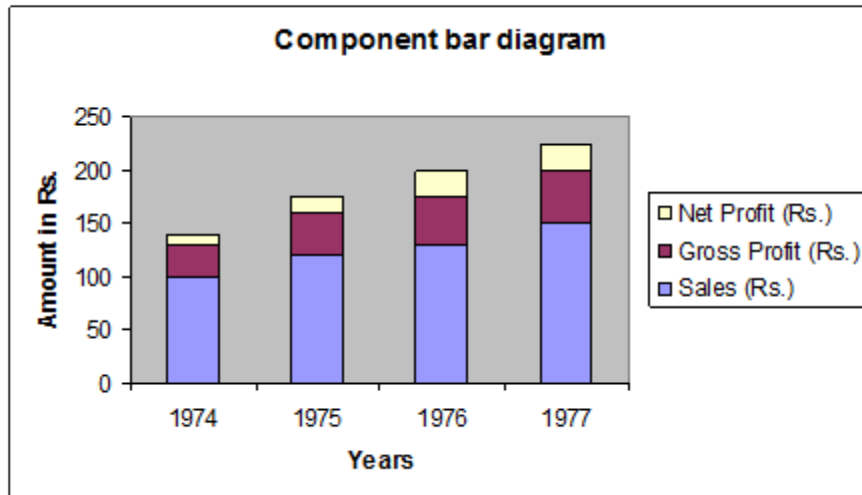
(b) Multiple Bar Chart:

1. Multiple bar chart is an extension of simple bar chart.

2. Grouped bars are used to represent related sets of data. For example, imports and exports of a country together are shown in multiple bar chart.

3. Each bar in a group is shaded or coloured differently for the sake of distinction.

(c) Component Bar Chart:

1. This chart consists of bars which are sub-divided into two or more parts.

2. The length of the bars is proportional to the totals.

3. The component bars are shaded or coloured differently.

Component bar diagram

Amount in Rs.

250
200
150
100
50
0

Net Profit (Rs.)
Gross Profit (Rs.)
Sales (Rs.)

1974   1975   1976   1977

Years

(d) Percentage Component Bar Chart:

1. Component bar charts may also be drawn on percentage basis by expressing the components as percentages of their respective totals.

2. All the bars are of equal length showing the 100%. These bars are sub-divided into component bars in proportion to the percentages of their components.

Weekly Product Sales

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%

| Mon | Tue | Wed | Thu | Fri |

34.40%   23.64%   11.67%   42.72%   45.24%

30.14%   42.39%   37.29%   33.76%   35.45%

35.46%   33.97%   51.04%   23.52%   19.31%

Hardware
Software
Service

(e) Pie Chart:
1. Pie chart is used to compare the relation between the whole and its components.

2. The difference between the component bar chart and pie chart is that in case of component bar chart the length of the bars are used while in case of a pie chart the area of the sector of a circle is used.

3. In pie chart, the circle is drawn with radii proportional to the square root of the quantities to be represented because the area of a circle is given by $2pr^2$.

4. The sectors are coloured and shaded differently.

5. To construct a pie chart, we draw a circle with some suitable radius (square root of the total). The angles are calculated for each sector as follows:

Angles for each sector = $\dfrac{\text{Component Part}}{\text{Total}} \times 360^o$

Population of Countries of the European Union in 2007 by percentage

16.6
29.7
12.8
7.7
12.3
9.0
11.9

■ Germany
■ France
☐ United Kingdom
■ Italy
☐ Spain
■ Poland
☐ All other countries (21)