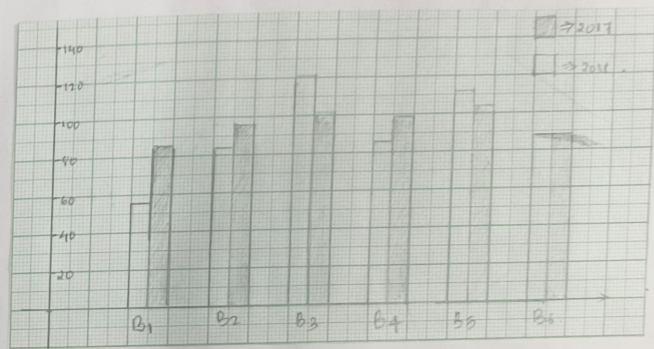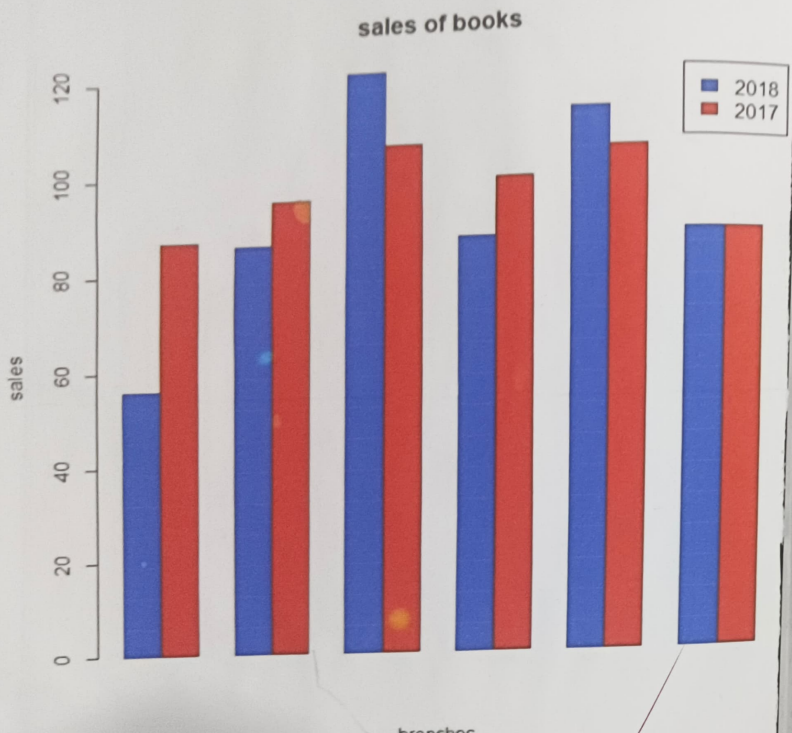## Program

```
branches <- c ("B1", "B2", "B3", "B4", "B5", "B6"); branches
years <- c ("2018", "2017"); years
values <- matrix (c( 56, 86, 121, 87, 113, 68, 87, 95, 106, 99, 105,
              88) byrow = TRUE, nrow = 2); values
barplot (values, main = "sales of book", names.arg = branches,
      xlab = "branches", ylab = "sales", col = c("blue", "red")
           beside = TRUE)
legend ("topright", years, cex = 0.7, fill = c ("blue", "red"))
```

1. Sales of books (in thousands number) from 6 branches B1, B2, B3, B4, B5, B6 of a publishing company in 2018 and 2017 are given below. Draw a multiple bar diagram for the same. Take branches as x axis

Branches	B1	B2	B3	B4	B5	B6.
2018	56	86	121	87	113	88
2017	87	95	106	99	105	88

sales of books

Program

```
Years <- c ("1991", "1992", "1993", "1994", "1995")

details <- c ("import", "export")

t <- matrix (c( 7930, 8850, 9780, 11720, 12150, 4260, 5225, 6125,
        7340, 8145) byrow = TRUE, nrow = 2, ncol = 5)

barplot (t, names.arg = years, xlab = "years", ylab = "values", main =
"Import and export values of canada", beside = TRUE, col = c ("Pink",
                                                              blue"))

legend ("top right", cex = 0.5, legend = c (import, export),
                                    fill = c ("pink", "blue"))
```
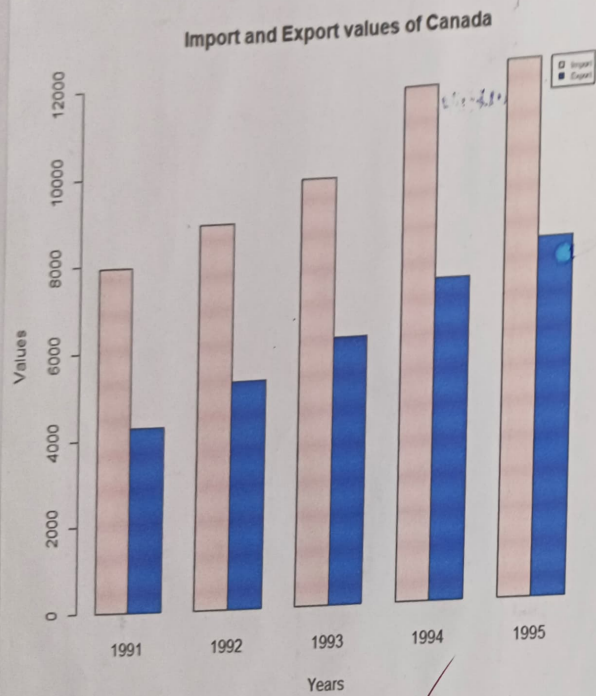
2. Draw a multiple bar chart and represent the import and export of canada (values in dollar) for the years 1991 to 1995

Years	Import	Export
1991	7930	4260
1992	8850	5225
1993	9780	6125
1994	11720	7340
1995	12150	8145

Output:

Import and Export values of Canada

Program

years <- c ("1995-1996", "1996-1997", "1997-1998", "1998-1999",
"1999-2000", "2000-2001", "2001-2002", "2002-2003",
"2003-2004", "2004-2005")

details <- c ("production of coffee", "production of tea)

t <- barplot (c (4500, 47320, 50659, 49886, 60470, 70550, 66690,
63322, 63850, 54300, 64802, 69319, 65225, 58126,
61955, 69132, 66090, 55348, 57553, 49503), byrow ="TRUE",
ylab= "values", main =" production of tea coffe and tea in
kerala", beside = TRUE, col = c ("red", "green"))

legend ("topright", details, cex = 0.5, legend = c ("production of coffee",
production of tea") , fill = c ("legend red", "green")

---

3. The following data gives the production (in tons) of coffee and tea in kerala. Represent the data by a suitable diagram and check which of the two is more consistent

Years	Production of coffee	Production of tea
1995-1996	4500	64802
1996-1997	47320	69319
1997-1998	50659	65225
1998-1999	49886	58126
1999-2000	60470	61955
2000-2001	70550	69132
2001-2002	66690	66090
2002-2003	63322	55348
2003-2004	63850	57553
2004-2005	54300	49503

Output :

Production details of Cofee and Tea in Kerala
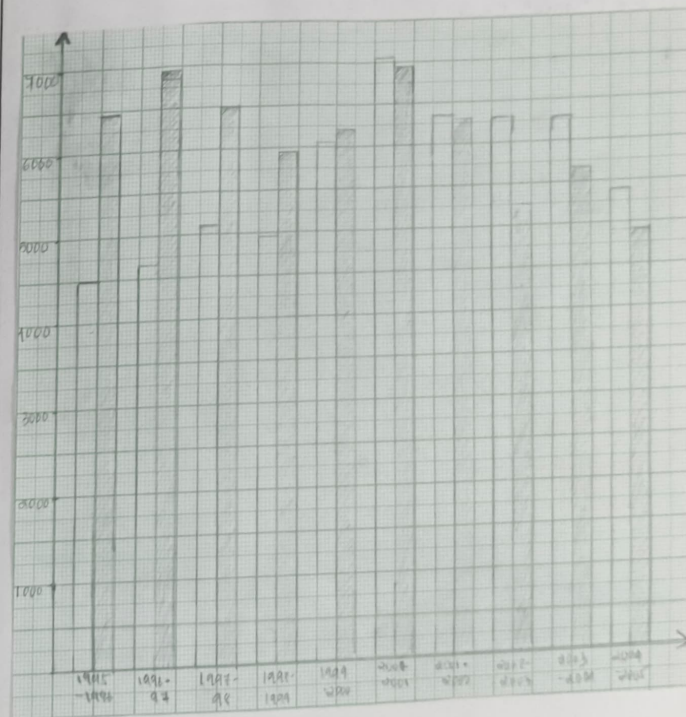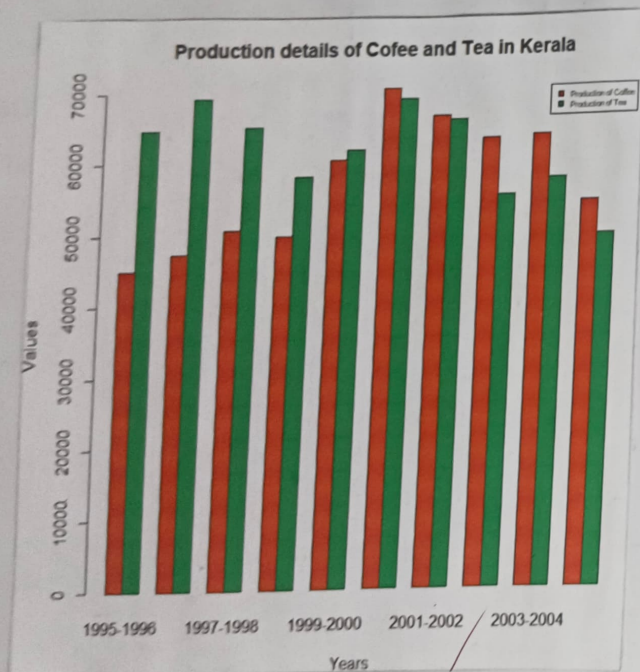
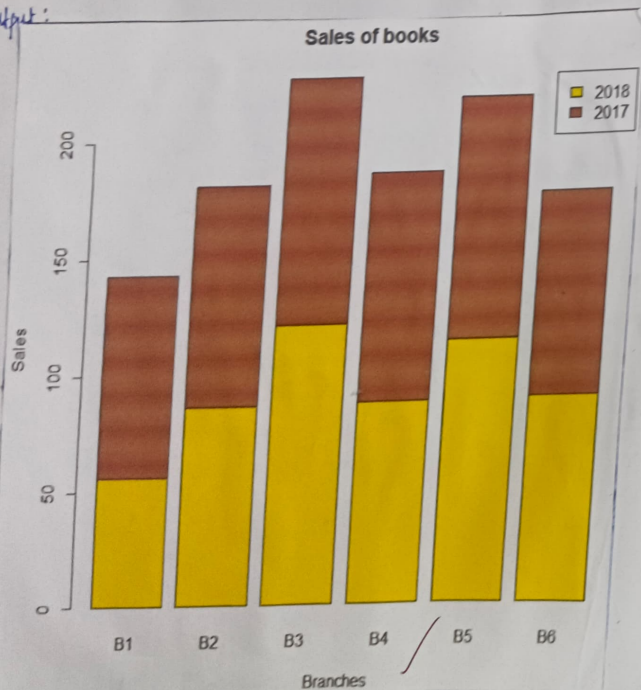## Program

```
branches <- c ("B1", "B2", "B3", "B4", "B5", "B6")

values <- c ("2018", "2017")

t <- matrix (c ( 56, 86, 121, 87, 113, 88, 87, 95, 106, 99, 105, 88),
        byrow = TRUE, nrow = 2, ncol = 6 )

barplot (t, names.arg = branches, xlab = "Branches", ylab = "Sales",
        main = "Sales of books", beside = FALSE, col = c ("Yellow", "brown"))

legend
```
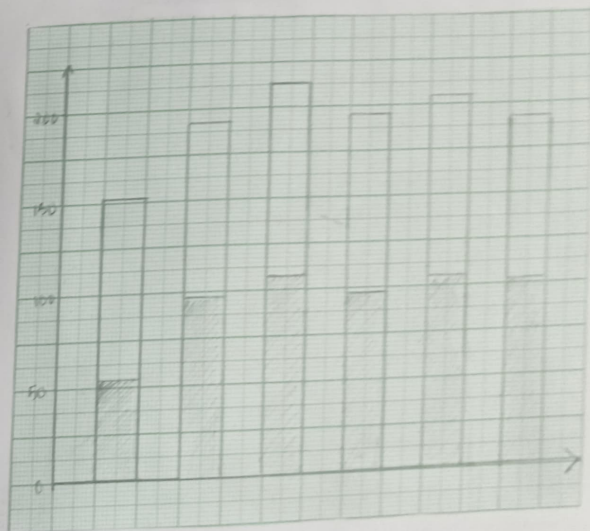
output:

4. Sales of books (c in thousand number) from 6 branches - B1, B2, B3, B4, B5, B6 of a publishing company in 2018 and 2017 are given below. Draw a subdivided bar diagram for the same. Take the branches as x-axis.

Branches	B1	B2	B3	B4	B5	B6
2018	56	86	121	87	113	88
2019	87	95	106	99	105	88

Program

```
midx <- seq (from = 5, to = 65, by = 10); midx
f <- c (12, 14, 17, 14, 8, 9, 11)
x <- rep (midx, f); x
hist (x, break = seq (from = 0, to = 70, by = 10), freq = TRUE,
      col = "light blue", border = "black")
```
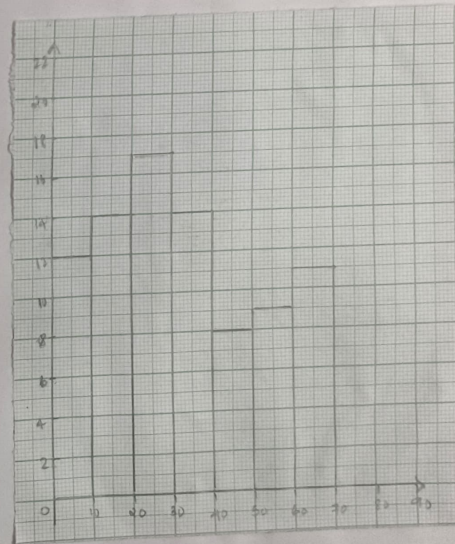
Ouput
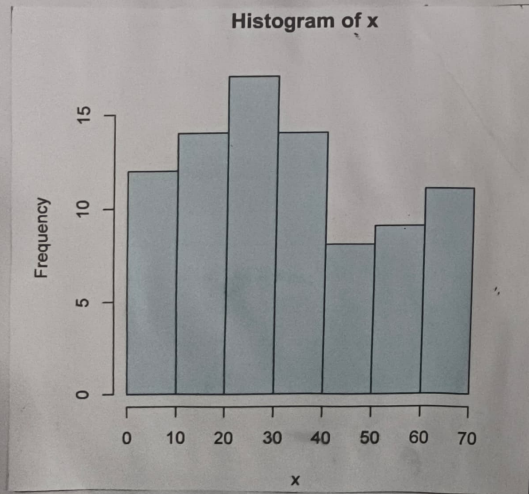
Histogram of x

5, Construct a histogram

class	0-10	10-20	20-30	30-40	40-50	50-60	60-70
f	12	14	17	14	8	9	11

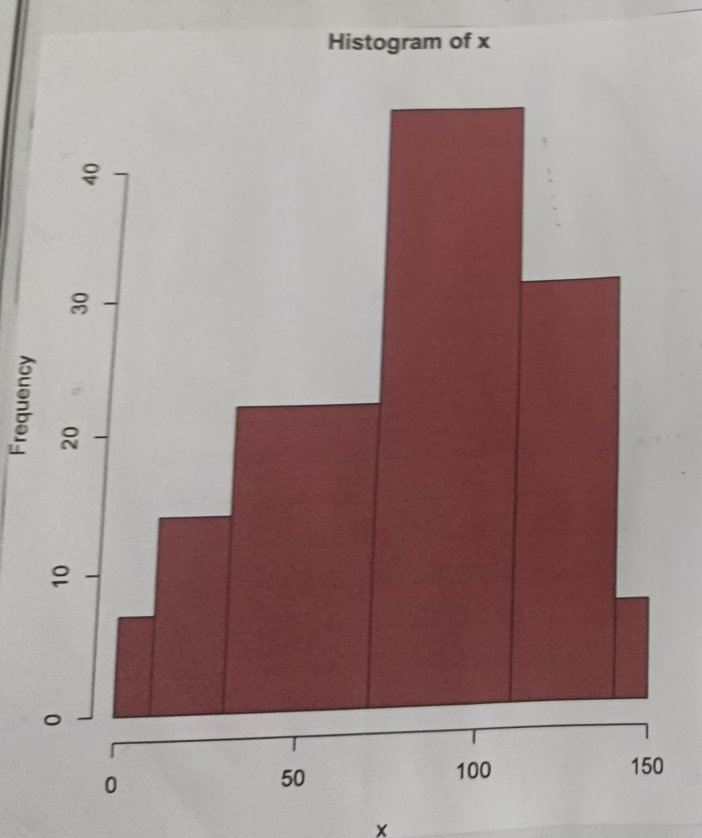## Program

```
midx <- c(5, 20, 50, 90, 125, 145); midx
f <- c(7, 14, 22, 45, 31, 7); f
x <- rep(midx, f); x
hist(x, break = c(10, 30, 70, 40, 140, 150), freq = TRUE,
     col = "brown", border = "black")
```


Histogram of x

6.
Draw a histogram

class	0-10	10-30	30-70	70-110	110-140	140-150
f	7	14	22	45	31	7

Program

data <- c (6526, 7108, 2568, 560, 763); data

names (data) <- c ("commedy", "Achion", "Romanhc", "drama", "scifi");

names (data)

Pie (data, mean= "movie genre chart", col = c (" Yellow", "Red", " brown",

"dark green", "dark blue"))

Commedy	Achion	Romance	Drama	Sufi
6526	7108	2568	560	763

Program

x <- c (57, 62, 61, 60, 54, 48, 78, 63, 55, 56, 38, 55, 60, 50, 76, 55, 64, 68, 48, 59, 48, 57, 30, 63, 70, 54, 56, 33, 59, 51); x

Stem (x)

Output:

The decimal is 1 digit(s) to the right of the |

```
3 | 03
3 | 8
4 |
4 | 888
5 | 013444
5 | 555667899
6 | 001234
6 |
7 | 0
7 | 68
```

Draw stem and leaf chart

57, 62, 61, 60, 54, 48, 78, 63, 55, 56, 38, 55, 60, 50, 76, 55, 64, 68, 48, 59, 48, 54, 30, 63, 70, 54, 56, 33, 59, 51

Procedure

30, 33, 38, 39, 48, 48, 48, 50, 51, 53, 54, 54, 54, 55, 55, 55, 56, 56, 57, 58, 59, 60, 60, 61, 62, 63, 64, 70, 76, 78

x	
3	0 3 8 9
4	8 8 8
5	0 1 3 4 4 4 5 5 5 6 6 7 8 9 9
6	0 0 1 2 3 4
7	0 6 8