SIDDHI SINGH

17BIT0028

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EXP-3

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PROBLEM: 1

```
> x = c(18,19,19,19,19,20,20,20,20,20,21,21,21,21,
      22,23,24,27,30,36)
> mean(x)
[1] 22
> median(x)
[1] 20.5
> y = x[x<25]
> md = median(y)
> md
[1] 20
> xr = table(x)
> mode = which(xr == max(xr))
> mode
20
 3
```

PROBLEM 2

```
> x = c(0,1,2,3)
> f = c(8,11,5,1)
> y = rep(x,f)
> mean = (sum(y))/(length(y))
> mean
[1] 0.96
> median(y)
[1] 1
```

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PROBLEM 3:

```
> mid = seq(147.5, 182.5, 5)
> mid
(1) 147.5 152.5 157.5 162.5 167.5 172.5 177.5 182.5
> f = c(4,6,28,58,64,30,5,5)
> fr.dist = data.frame(mid, f)
> fr.dist
```

	mid	f
1	147.5	4
2	152.5	6
3	157.5	28
4	162.5	58
5	167.5	64
6	172.5	30
7	177.5	5
8	182.5	5

Mean :-

```
> mean = (sum(mid*f))/sum(f)
> mean
[1] 165.175
```

Median :-

```
> midx = seq(147.5, 182.5, 5)
> frequency = c(4,6,28,58,64,30,5,5)
> fr.dist <- data.frame(midx, frequency)
> fr.dist
```

	midx	frequency
1	147.5	4
2	152.5	6
3	157.5	28

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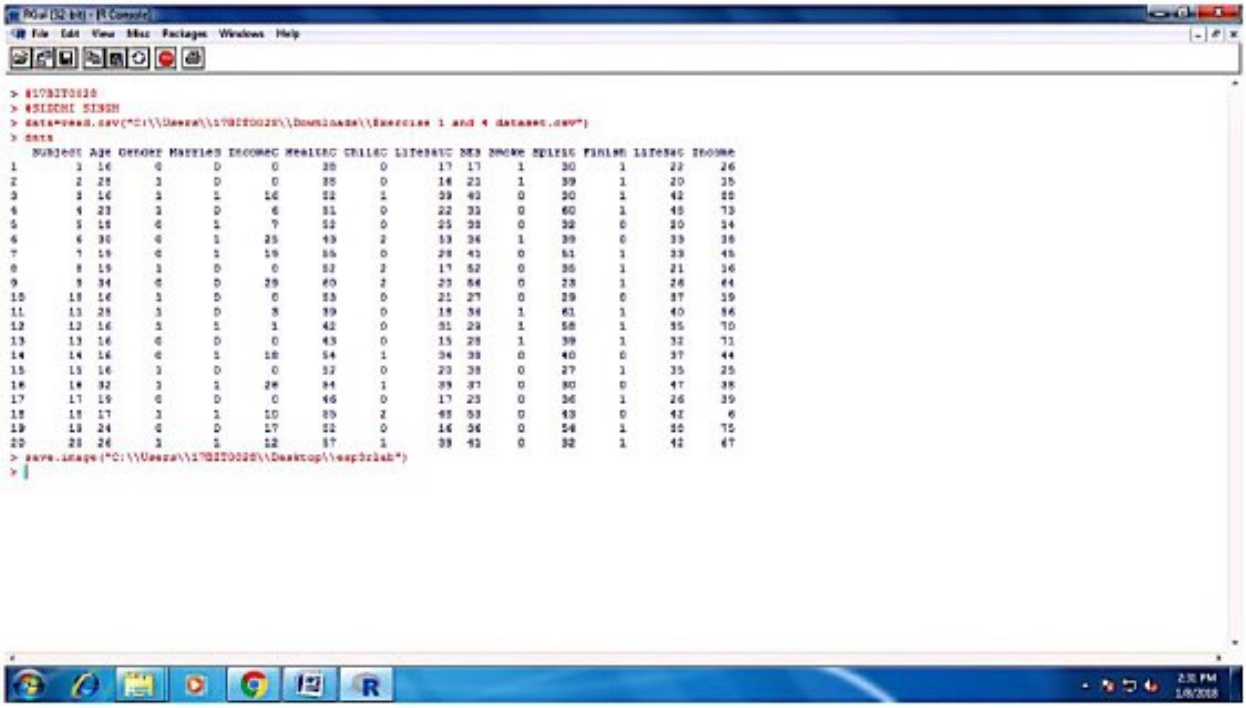

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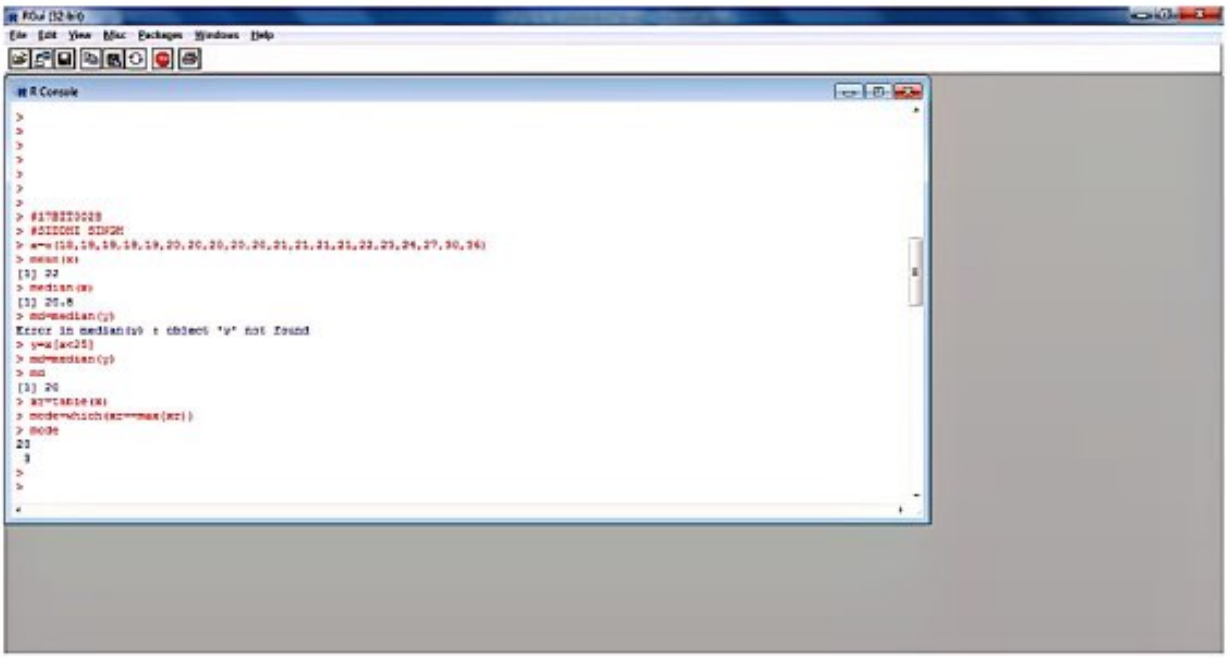
Problem1:Twenty students , graduates and undergraduates, were enrolled in a statistics course. Their ages were 18,19,19,19,19,20,20,20,20,20,21,21,21,21,22,23,24,27 ,30,36.

a) Find Mean and Median of all students

b) Find median age of all students under 25 years.

c) Find modal age of all students



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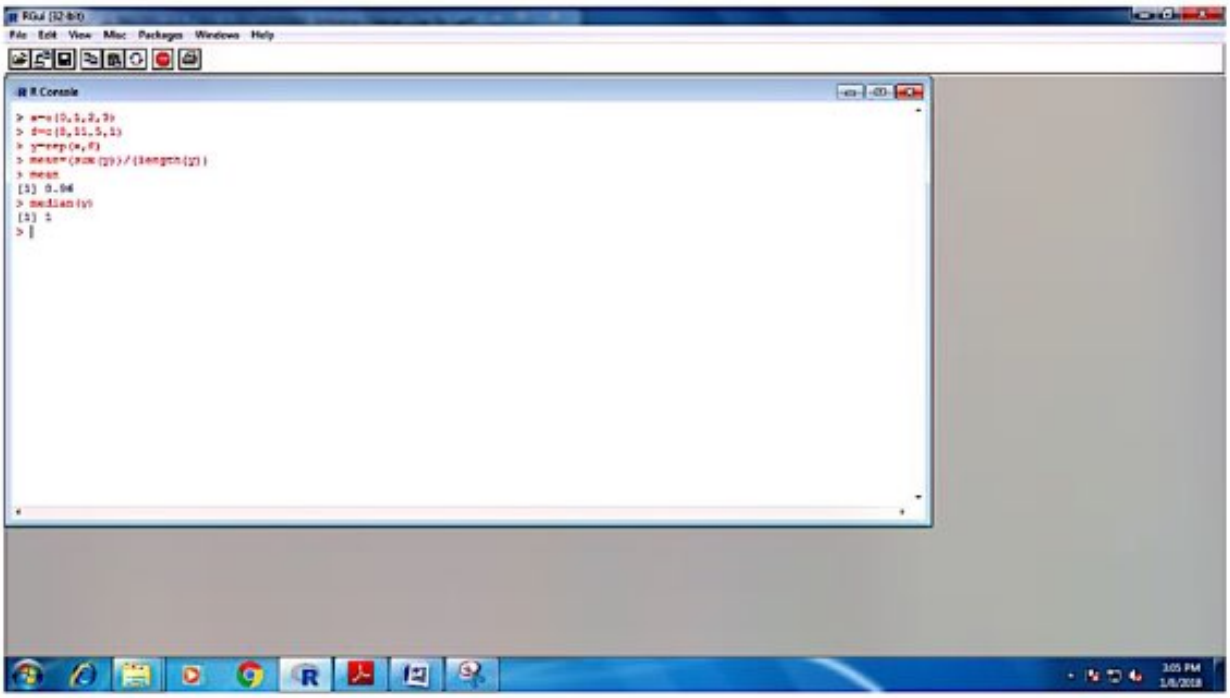
Problem 2 : A survey of 25 faculty members is taken in a college to study their
Vocational mobility. They were asked the question "In addition to your present
Position, at how many educational institutes have served on the
Faculty? Following is the frequency distribution of their responses.

X	0	1	2	3
f	8	11	5	1

Find mean and median of the distribution



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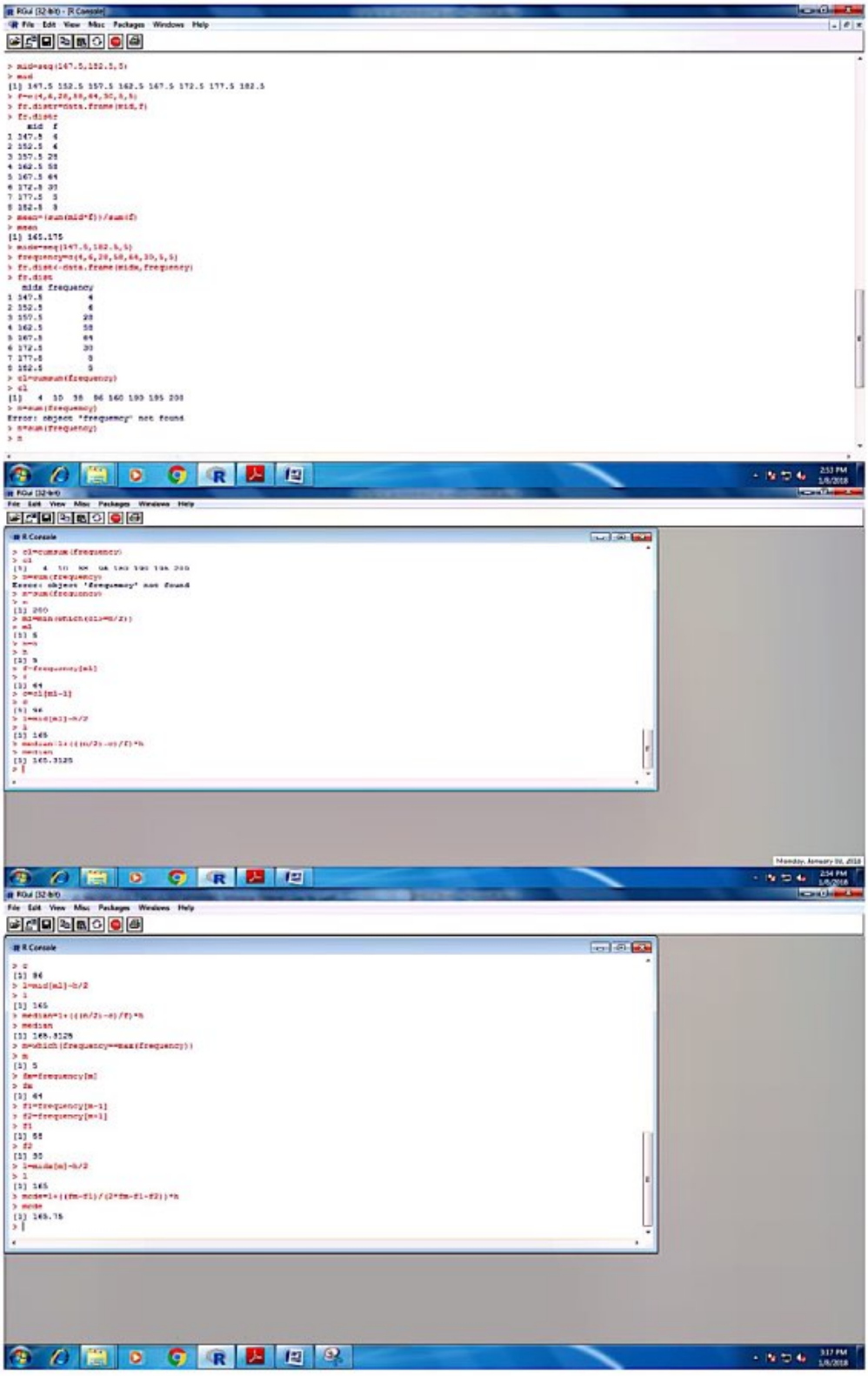
Problem 3: Compute mean, median and mode of for the following frequency Distribution:

Height in Cm	*145-150*	*150-155*	*155-160*	*160-165*	*165-170*	*170-175*	*175-180*	*180-185*
No. of Adult men	*4*	*6*	*28*	*58*	*64*	*30*	*5*	*5*



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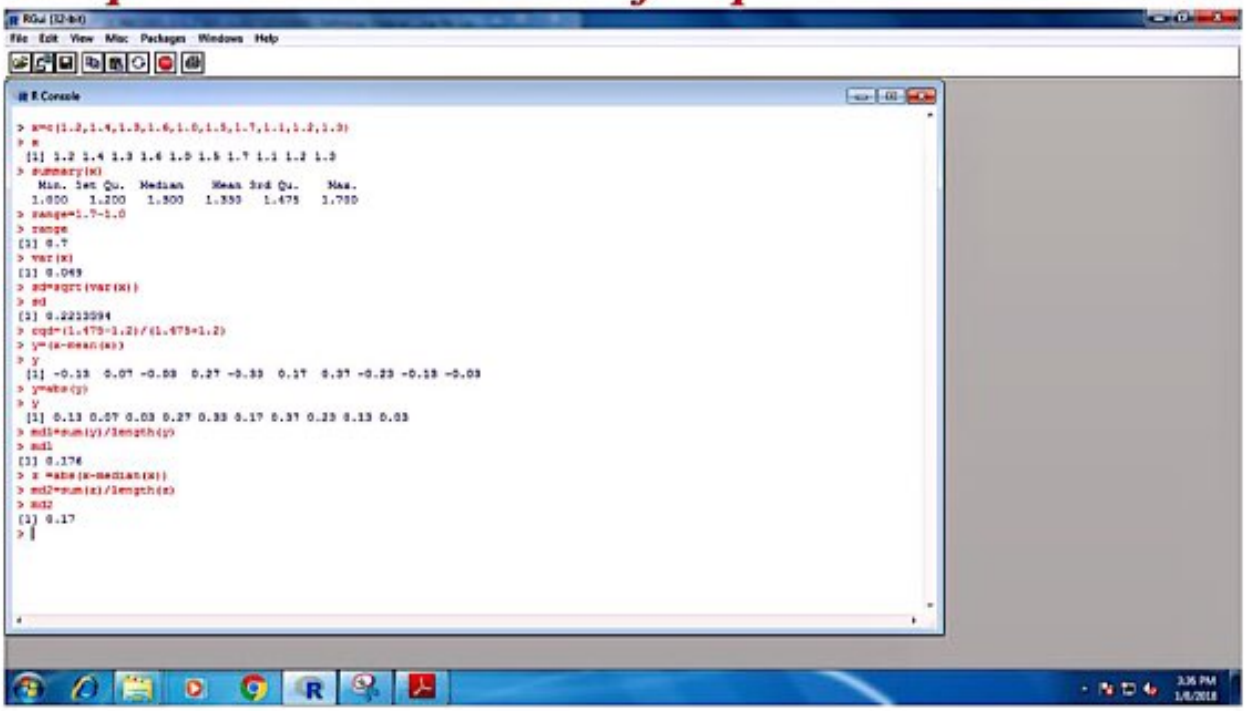
An entomologist studying morphological variation in species of mosquito recorded the following data on body length: 1.2,1.4,1.3,1.6,1.0,1.5,1.7,1.1,1.2,1.3 Compute all the measures of dispersion.



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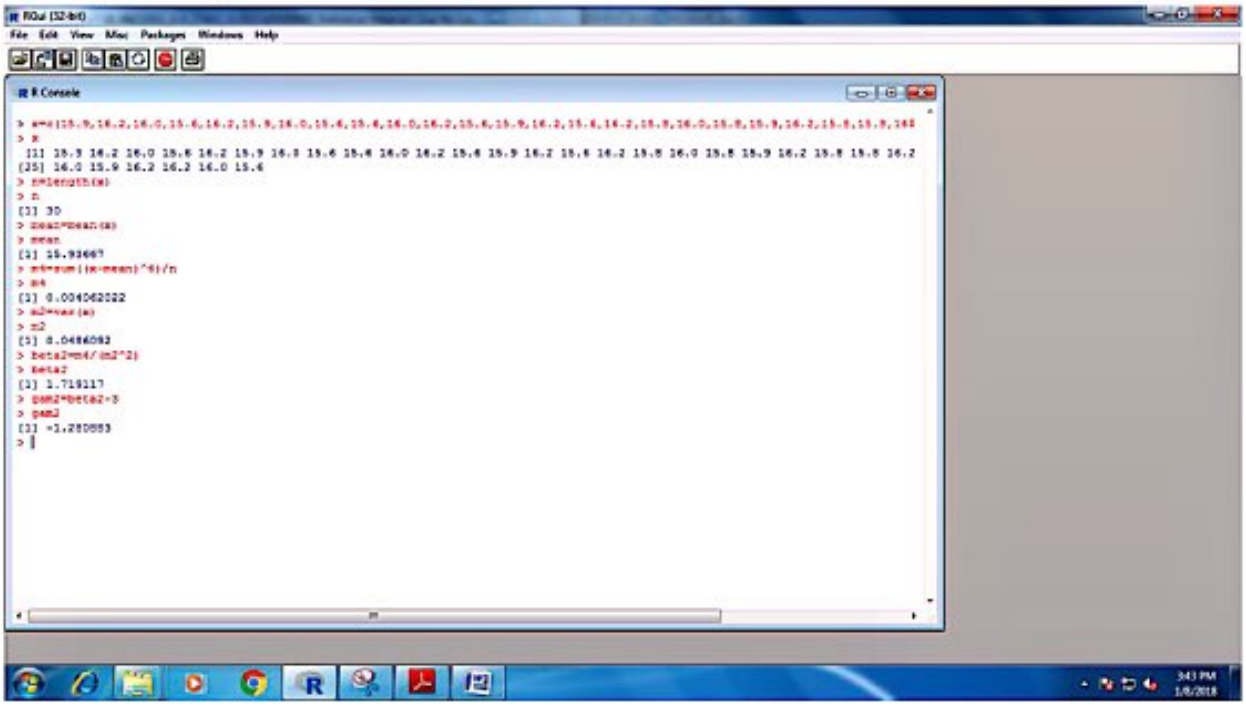
Measure of skewness and kurtosis using Moments:

Problem : A quality control engineer is intrested in determining whether a
machine is properly adjusted to dispense 16 ounces of sugar.Following data
refer to the net weight(in ounces) packed in thirty one-pound bags after the
machine was adjusted.Compute the measures skewness and kurtosis

15.9,16.2,16.0,15.6,16.2,15.9,16.0,15.6,15.6,16.0,16.2,
15.6,15.9,16.2,15.6,16.2,
15.8,16.0,15.8,15.9,16.2,15.8,15.8,16.2,16.0,15.9,16.2,
16.2,16.0,15.6



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