NAME :- TUSHAR SAKHUJA

CLASS :- MCA ‘B’

PRN :- 2347262

TASK-1

CODE :-

#You are provided with a vector of monthly sales data for a small business. Your task is to perform various operations on this data using vector arithmetic,sorting, and reverse sorting in R.

#1.Create a vector named sales_data with the following sales figures (in thousands of dollars) for the last 12 months: [45, 60, 35, 75, 80, 62, 48, 53, 69, 72, 40, 55].

```
sales_data=c(45,60,35,75,80,62,48,53,69,72,40,55)

sales_data
```

#2.Calculate the total annual sales by summing the elements in the sales_data vector.

```
annualsales=sum(sales_data)

annualsales
```

#3.Compute the monthly average sales by dividing the total annual sales by 12 (the number of months).

```
avg_sales=annualsales/12

avg_sales
```

#4.Determine the month with the highest sales and the corresponding sales figure. Also, find the month with the lowest sales and its sales figure.

```
max_sales=max(sales_data)

max_sales

min_sales=min(sales_data)
```

#5.Increase the sales figure for the third month (March) by 10%.

```
march_sales_index=3
```

```
sales_data[march_sales_index]=sales_data[march_sales_index] * 1.10

sales_data


#6.Sort the sales_data vector in ascending order and create a new vector named sorted_sales.

sorted_sales=sort(sales_data)

sorted_sales


#7.Sort the sales_data vector in descending order and create a new vector named reverse_sorted_sales.

reverse_sorted_sales=sort(sales_data,decreasing = TRUE)

reverse_sorted_sales


#8.Calculate the median sales value from the sorted_sales vector.

median_sales=median(sorted_sales)

median_sales
```

OUTPUT :-

```
> #1.Create a vector named sales_data with the following sales figures (in th
ousands of dollars) for the last 12 months: [45, 60, 35, 75, 80, 62, 48, 53,
69, 72, 40, 55].

> sales_data=c(45,60,35,75,80,62,48,53,69,72,40,55)

> sales_data

 [1] 45 60 35 75 80 62 48 53 69 72 40 55

> #2.Calculate the total annual sales by summing the elements in the sales_da
ta vector.

> annualsales=sum(sales_data)

> annualsales

[1] 694

> #3.Compute the monthly average sales by dividing the total annual sales by
12 (the number of months).

> avg_sales=annualsales/12
```

```
> avg_sales

[1] 57.83333

> #4.Determine the month with the highest sales and the corresponding sales f
igure. Also, find the month with the lowest sales and its sales figure.

> max_sales=max(sales_data)

> max_sales

[1] 80

> min_sales=min(sales_data)

> #5.Increase the sales figure for the third month (March) by 10%.

> march_sales_index=3

> sales_data[march_sales_index]=sales_data[march_sales_index] * 1.10

> sales_data

 [1] 45.0 60.0 38.5 75.0 80.0 62.0 48.0 53.0 69.0 72.0 40.0 55.0

> #6.Sort the sales_data vector in ascending order and create a new vector na
med sorted_sales.

> sorted_sales=sort(sales_data)

> sorted_sales

 [1] 38.5 40.0 45.0 48.0 53.0 55.0 60.0 62.0 69.0 72.0 75.0 80.0

> #7.Sort the sales_data vector in descending order and create a new vector n
amed reverse_sorted_sales.

> reverse_sorted_sales=sort(sales_data,decreasing = TRUE)

> reverse_sorted_sales

 [1] 80.0 75.0 72.0 69.0 62.0 60.0 55.0 53.0 48.0 45.0 40.0 38.5

> #8.Calculate the median sales value from the sorted_sales vector.

> median_sales=median(sorted_sales)

> median_sales

[1] 57.5
```