Task1–Vector-Operations.R

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```
# 1. Create a vector named sales_data
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
total_annual_sales = sum(sales_data);cat("Total Annual Sales: $", total_annual_sales,
"\n")
```

```
## Total Annual Sales: $ 694
```

```
# 3. Compute the monthly average sales
monthly_average_sales = total_annual_sales / 12;cat("Monthly Average Sales: $", month
ly_average_sales, "\n")
```

```
## Monthly Average Sales: $ 57.83333
```

```
# 4. Determine the month with the highest and lowest sales
max_sales_month_index = order(sales_data,decreasing = TRUE)[1];
min_sales_month_index = order(sales_data,decreasing = FALSE)[1];
mth = c("January","February","March","April","May","June","July","August","Septembe
r","October","November","December")
max_sales_month=mth[max_sales_month_index]
min_sales_month=mth[min_sales_month_index]
max_sales_figure = sales_data[max_sales_month_index]
min_sales_figure = sales_data[min_sales_month_index]
cat("Month with Highest Sales: Month ", max_sales_month, " with Sales: $", max_sales_
figure, "\n")
```

```
## Month with Highest Sales: Month  May  with Sales: $ 80
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cat("Month with Lowest Sales: Month ", min_sales_month, " with Sales: $", min_sales_f
igure, "\n")
```

```
## Month with Lowest Sales: Month  March  with Sales: $ 35
```

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

sales_data[3] =sales_data[3] + (sales_data[3]*0.1)
cat("Increased sales figure for the third month (March) by 10%:" ,sales_data[3])
```

```
## Increased sales figure for the third month (March) by 10%: 38.5
```

```
# 6. Sort the sales_data vector in ascending order
sorted_sales = sort(sales_data);cat("Sorted Sales data in ascending :",sorted_sales)
```

```
## Sorted Sales data in ascending : 38.5 40 45 48 53 55 60 62 69 72 75 80
```

```
# 7. Sort the sales_data vector in descending order
reverse_sorted_sales = sort(sales_data, decreasing = TRUE);cat("Sorted Sales data in
descending order :",reverse_sorted_sales)
```

```
## Sorted Sales data in descending order : 80 75 72 69 62 60 55 53 48 45 40 38.5
```

```
# 8. Calculate the median sales value from the sorted_sales vector
median_sales = median(sorted_sales);cat("Median of sales data :",median_sales)
```

```
## Median of sales data : 57.5
```