Spring 2020

ET131

*Transforming Ideas to Innovations I*

Lab # 2

Microsoft Excel 2

Date:12/2/2020

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| **Feedback/Comments:** |
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| **Grade: /100** |

1. **Introduction**

MS Excel is a spreadsheet-based application designed for easy data handling & manipulation. This experiment will be a good starting point for the students of ET 131 gain knowledge and skills about the basics of chart plotting in MS Excel worksheets and to learn some new commands related to Plotting, linking and formulas.

1. **Objectives**
   * Practice Microsoft Excel Software to use in multiple fields of engineering
   * Gain administrative skills
   * To practice data statistical analysis and basic chart insertion in MS Excel.
   * To learn basic chart formatting and editing using MS Excel.
2. **Equipment/Components/Software:**

|  |  |
| --- | --- |
| **Software** | Microsoft Excel |
| **Boards** | - |
| **Equipment** | PC |
| **Components/**  **Specimen/**  **….** | - |

1. **Rubrics**

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| --- | --- | --- | --- | --- | --- | --- |
| **Criteria** | **Description** | **Weight** | **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| **Criteria 1** | **Maximum, Minimum, Average, Standard Deviation and Total** | **20%** | Student was not able to use 3 function properly | Student was not able to use 2 function properly | Student was not able to use 1 function properly | All functions used properly: Maximum, Minimum, Average, Standard Deviation and Total |
| **Criteria 2** | **Column chart: Quarters as the x-axis, title “Quarter Sales”, Both Labels, Standard error bar** | **20%** | Column chart is given with 3 missing details | Column chart is given with 2 missing details | Column chart is given with 1 missing detail | Column chart is given with full details. |
| **Criteria 3** | **Pie chart: Chart type 3, Monochromatic – color 6, title “Sales on the second quarter ”** | **20%** | Pie chart is given with 3 missing details | Pie chart is given with 2 missing details | Pie chart is given with 1 missing detail or chart contains wrong data. | Pie chart is given with full details. |
| **Criteria 4** | **Scatter chart: Chart style 6,**  **title “Quarterly Sales”, both labels, linear trend line** | **20%** | Scatter chart is given with 2 missing details | Scatter chart is given with 2 missing details | Scatter chart is given with 1 missing detail or chart contains wrong data. | Scatter chart is given with full details. |
| **Criteria 5** | **Combo Chart: Switch column/ row,**  **title “Quarterly Sales”,**   **Edit plot area** **color to “Grey – 25% , Background 2”** | **20%** | Combo chart is given with 3 missing details | Combo chart is given with 2 missing details | Combo chart is given with 1 missing detail or chart contains wrong data. | Combo chart is given with full details. |

1. **Experimental Work**
2. Download “**ET 131\_Lab 2 Material**” workbook from Moodle.
3. **Format** **data in cells: E6 – H10** with a thousand’s separator(i.e.: **use comma style**) and **reduce** the number of **decimal places to 0**.
4. **Complete the table** using the required statistics: Maximum, Minimum, Average, Standard Deviation and Total.
5. Create the following charts and move each one of them to a different sheet:

* **Column chart** for the five sales man showing their sales for each quarter. Note to make the **Quarters as the x-axis** of the chart. **Edit** the **title** of the chart to “**Quarterly Sales**”. Edit your chart to **add labels for both axes** and **standard error bars** to the columns of the chart.
* **Pie chart** showing the sales percentages for the **second quarter Q2**.Choose **Pie chart** and **change the color** to **Monochromatic – color 6. Edit** the **title** of the chart to “**Sales on the second quarter** ”.
* **Scatter chart** for the sales on all the 4 quarters.Choose **chart style 6** and **edit** the **title** of the chart to “**Quarterly Sales**”. Edit your chart to **add labels for both axes** and **data labels above** the plotted data points. **Add a linear trend line** to your chart for **Yousef’s** sales.
* **Combo Chart** for the sales on the 4 quarters. From **Select source date** > **Switch column/ row**. **Edit** the **title** of the chart to “**Quarterly Sales**”.  **Edit plot area** and change the color to “**Grey – 25% , Background 2**”.

e. Save your work as**: ET131\_Lab2 \_*your name\_ID*.**

IMPORTANT:

Save & Submit this file and the Excel file into Moodle.

1. **Appendix**

* Excel screenshot Student Submission (Please make sure to show the formulas used in the screenshots)

