FREQUENTLY ASKED QUESTIONS

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(courtesy of previous students)

Assignment 2 - CSE 6329

Data Recording and Analysis

1) There are a lot of graphs to be drawn for this assignment. How should I draw them (what graphing tool should I use)? I don’t have a lot of experience drawing graphs like this.

A) You can use any graphing tool you wish and then paste the graphs into the report. Paste them as “bitmaps” so the pasting process doesn’t mess up the fonts and such.

Since the data are kept in a spreadsheet (DRAT tool) I recommend you use Excel graphs. If you don’t know how to use Excel graphs, this is a good time to learn because any serious metrics effort will require that you do graphs and use a spreadsheet tool such as Excel.

2) The sixth Post-release quality graph is one that we choose ourselves. Do you have any hints about what we might choose?

A) This is your chance to show your creativity and to show that you understand what all of the data are about. I suggest you imagine you are in charge of this project and ask yourself what you might like to know that hasn’t already been answered by one of the other graphs. Keep in mind that a good metrics effort begins with an information need, which leads to questions, which leads to things you want to measure. You also have the opportunity to examine the data in any way you choose to see if there is something interesting that is worth noting and, if so, how you might best graph that. Deciding how to graph what you measure happens after you have decided what you want to know or show. In this case, all the base measures have been provided but there may be other compound measures you could use that would provide information you don’t already have from the earlier graphs.

Here are some examples of things you might like to know:

* We looked at product ZD, but didn’t normalize it. How would it look if normalized when compared with some of the other graphs?
* We looked at product ZD, but what about all the others. Is there some other product or grouping of products that is worth looking at?
* Are some language or development processes more consistent than others in terms of how many defects they have?
* Is there any significant difference based on the year in which the product was developed? If so, is there something else you should examine?
* Is there some other variable that affects the outcome that hasn’t been examined yet?
* Do any of the other graphs raise a question that could be answered by a different graph?

3) Why do we have to turn in the spreadsheet (DRAT tool) if the grade is based on the report?

A) There are several reasons. The main reason is to help the grader or instructor understand what you did wrong, if you make a mistake. We’ve found over the years that sometimes it is a lot more useful to tell a student “you had an error in the formula you used in cell R57” than to say “something is wrong with the red line on your graph”. Another reason is simply to help us understand what you did.

4) I teamed up with another student on this assignment. She did all the spreadsheet work and I wrote the report. If she made a mistake on the spreadsheet, why should I be penalized?

A) You should not be dividing the work like that. The purpose of the assignment is for each student to learn both how to do the spreadsheet work and how to write the report. So the correct approach is for you to work together on each part or, when you divide up the work, for each of you to review the other’s work and for you as a team to discuss each part of the work. One of you may spot a mistake in the other’s work or see a better way to do part of the work. In this way you both learn more and improve your knowledge and skills. This is what teaming is all about. It isn’t just splitting the work. It is making sure that both of you know everything involved.

(In the workplace, teaming also has another benefit – if one of you is unavailable to explain something, the other one knows all the answers.)

If you team up with someone, you should select someone with whom you can work in this fashion. If you cannot work in this fashion with the other student, perhaps you should no longer team with them on future assignments.

By the way, teaming is very common in real-life software projects and, as a rule, the team either succeeds or fails based on the work of both members, so checking each other’s work and discussing things is part of the reason for teaming.

5) Regarding Post-Release Quality (Note 1) – how exactly do I calculate Total Defects for each month?

* Total Defects = Previous month’s uncorrected defects + new defects, or
* Total Defects = Previous month’s defects + new defects

A) For this assignment, **total defects** is intended to help you understand how many defects were in the product when you shipped it to customers. So it includes corrected and uncorrected defects. In other words, the second formula is correct. Total defects is the top line in the post-release quality graph and it should never decrease.

6) Regarding Post-Release Quality History (Note 2) – When calculating best, worst and average, do I average each product over 12 months or only use the values at the 12 month point?

A) For this graph you always use the 12 month values, because the point of this graph is to tell you how good or bad your products were, based on their first year of use. The value at 12 months is cumulative – it includes all defects found during the first year.

7) Regarding Post-Release Quality History (Note 2) – When calculating best, worst and average, do I total all of the products first? What if two products were released in the same month – do I total them?

A) No. The goal here is to look at all products released in a given time period. Let’s consider the case of all products released in a given year. Suppose three products were released in a given year: A had 12 defects, B had 21 defects and C had 36 defects. Then the best would be A (12) the worst would be C (36) and the average would be 23 ((12+21+36)/3). Pay attention to the horizontal axis on the Post-release quality history graph. In this example, it is year of release. ALL products released in a given year, whether released in January or December of that year or any time between, are included when computing the best, worst, and average on a yearly basis. (Note that generating the graph for this case will require some data refinement, namely shifting some numbers around so you can include all data for the given year). Just because two products were released in the same month doesn’t mean you combine them. [If showing the data by quarter, you count only products released in a given quarter, but you still use their “at the end of 12 months” total defect values.]

8) A student who took this course before has shown me his report and spreadsheet. What is permitted when using his report and spreadsheet?

A) You may look over his report and spreadsheet ONLY to see the general format in which things are done and to get an idea of how much work you will have to do. The previous student may also give you hints about how to generate graphs or do things in Excel® or Word® or PowerPoint®. But you must create your own spreadsheet, your own graphs and your own report. You may NOT copy spreadsheets or words or formulas or graphs or data from any other student’s report or spreadsheet.

**\*\* Warning \*\* I change the data, the SOW, the report format and other things every semester, so copying someone else’s work will likely produce an incorrect answer. Furthermore, it is against the UTA honor code to copy the work of another student and claim it as your own. The graders and I have tools to detect such copying, so make sure all the work you do is your own.**