

TDDE46: Software Quality

Lab 1

FUNCTIONS POINTS

Objectives:

1. The main objective of this lab to let student familiar with the function points analysis.
2. To understand the problem scenario to convert it into diagram to get function points
3. Calculate function points manually and with an online software
4. Share your solutions within groups

Problem Scenario:

Registration in courses at Linköping University (LiU) requires an eligibility criterion (i.e. pre-requisites) in terms of other courses. The simple criterion, at this moment, is the course/area name (i.e. statistics, programming or economics). It has been complained that it is not a specific criterion for example most of the time, the name of the course is different but contents (i.e. topics covered) are similar. LiU wants to build a system that can allow student to upload the syllabus (pre-requisite course outline) on the system together with course name which they want to take. The system will determine, if you are allowed to take this course based on the information submitted by course examiner and your input (i.e. course syllabus and course name). This is a repetitive process. You will can add as many files and courses as you want, in the online bucket, but not more than your expected credit limit of particular semester (i.e. maximum 36 credits). Once you finish, you will be provided with four options, depending on your input and system calculations:

1. Everything is correct and proceed with registration
2. Clarification needed. Meet the program advisor.
3. Edit the bucket
4. Delete the bucket

LiU is not sure whether this system should be developed in-house IT department or through outsourcing. LiU wants you to submit the quote (i.e. tentative price) by the end of today. You are a software company, and this is your first project.

Good to know: The average rate is 2000 SEK per hour.

Exercise 1:

If you were not aware of function points analysis and given short time and first-hand experience of yours, how would you have estimated the size of this software? Write one paragraph. We will discuss with each other the results of this exercise either during the lab or at the end.

Exercise 2:

It is recommended to draw a diagram from the problem scenario to understand the components of function points in details. Draw a diagram and show it to your instructor. There is a possibility that you may have a different diagram as compared to other students. This is normal. Make realistic assumptions where needed.

Exercise 3:

Calculate function points such as Internal Logical Files, External Interface Files, External Inputs, External Outputs, External Inquiries. You can take help from online material to about function points.

Exercise 4:

Repeat step number 3 two more times with different values of adjustment factors. This exercise will reveal how output changes with minor changes in adjustment factor. The change in values is up to you.

Exercise 5:

Repeat step number 3 and 4 with an online tool. Below are few examples of online available tool to calculate function points. There is a possibility that manual output does not relate to online output. This is fine.

Exercise 6:

Discuss your solution with two other groups and write one paragraph about:

1. What makes your solution different than others?
2. Motivate which solution (i.e. specific value in adjustment factor), within your group, is correct or sufficient or what you can learn from each other.

http://groups.umd.umich.edu/cis/course.des/cis525/js/f00/harvey/FP_Calc.html

<http://groups.umd.umich.edu/cis/course.des/cis375/projects/fp99/table.html>