Case Study – Function Point Analysis

Form a team of 2 to 4 students.

You are about to develop an app for a Pizzeria. People can order pizzas with the app. You have started with the GUI design.

The following shows two options for the Pizza Selection Screen.

Option 1:

Explanation:
- Toppings are read from another application (kitchen application). If the topping is not available it is not displayed.
- The cost of the Pizza is calculated automatically.
- When the OK button is clicked the Toppings, Pizza Crust Type and Cost of Pizza are saved for further processing.

Option 2:
Explanation:
- The Items in the drop down box are hard coded – not read from a file.
- Available Toppings are read from another application (kitchen application).
- When a Topping is selected from Available Toppings it is copied to Selected Toppings
- The Cost of the Pizza is automatically calculated.
- When the OK button is clicked the Selected Toppings, Pizza Crust Type and Cost of Pizza are saved for further processing.

To Do:

1. What are the function types (EI, EQ, EO, EIF, ILF) and elements (DET, FTR, RET) in each of the options? Are there differences?

2. What is the unadjusted function point count for the Pizza Selection Screen Option 2?

3. Assume total number of unadjusted function point for the Pizza App equals 1000. You have the following information about system characteristics:
   - No special performance requirements were stated
   - 50% of transactions are interactive data entry
What is the total number of adjusted function points of the system?

How would this influence the FP count?

Hint: Look up the rating scales for System Characteristics in the FPA Manual posted on the course wiki (beginning page 68).
Answers:

Ad 1: Option 1 = Option 2

Function types:

1 EIF: topping data – 1 RET, 1 DET (topping, perhaps more but probably <15)
1 ILF: order – 1 RET, 3 DETs (crust, topping, price, more? But probably <15)
1 EQ: topping choices – 1 FTR, 1 DET (topping, recursive)
1 EI: order – (crust, topping, price, OK)

What about “Cancel” button? -> does not count because not involved in a transaction. (just like navigation or like showing static information via hyperlinks)

Ad 2:
EIF: <=5 RETs, <=19 DETs -> low -> 5 unadjusted FPs
ILF: <=5 RETs, <=19 DETs -> low -> 7 unadjusted FPs
EQ: 1 FTR, 1 DET -> low -> 3 unadjusted FPs
EI: 1 FTR, 1 DET -> low -> 3 unadjusted FPs

Sum: 18 unadjusted FPs

Ad 3:
The following GSCs are affected:
- 3-Performance: score = 0
- 6-Online Data Entry: score = 5

Those two GSCs would cancel each other out -> Adjustment Factor = 1 if the same holds for the remaining 12 GSCs

What to do, if information for a specific system characteristic is not available (or not given)? -> make reasonable assumptions