**2.3.3 Function Point Estimation Technique**

1. Overview

This section describes the methodology used to calculate the estimated number of hours of the project using function point estimation, using the techniques provided to us in class in Powerpoint 2, Slides 31-37.

1. Estimation Methodology
   1. Functionality Breakdown – Each piece of functionality specified in the project specification sheet, as well as additional functionality, is broken down into units that can be categorized as one of the following (from Slide 33):
      1. **EI - external inputs**, which are the components responsible for introducing changes in system's internal data.
      2. **EO - external outputs**, which are the ways system's internal data can be presented, but beware - there are a few similarities with EQ components, though.
      3. **EQ - external inquiries**, which are the methods for reading system's data without modifying it.
      4. **EIF - external interface files**, which are responsible for exchanging data with other systems.
      5. **ILF - internal logical files**, which are files that are being used by the system itself.
   2. Complexity Classification
      1. Each piece of functionality from the Functionality Breakdown is assigned a complexity rating, based on a best-guess estimation of complexity, which is in turn based on prior experience with computer science projects and curriculum.
   3. Function Point Valuation
      1. Each piece of functionality is assigned a point value based on its Complexity Classification, utilizing the following table (Slide 36):

|  |  |  |  |
| --- | --- | --- | --- |
| **Component:** | **Complexity:** | | |
| **Low** | **Average** | **High** |
| EI | 3 | 4 | 6 |
| EO | 4 | 5 | 7 |
| EQ | 3 | 5 | 6 |
| EIF | 5 | 7 | 10 |
| ILF | 7 | 10 | 15 |

* 1. Function Point Summation
     1. The Function Point Valuation of each piece of functionality is summed to generate the Total Function Point Valuation (Slide 37)

Where denotes the number of pieces of functionality and denotes the function points for the th piece of functionality.

* 1. Total Hours Estimation
     1. The Total Function Point Valuation is multiplied by 8, which Slide 37 explains is the number of hours equivalent to 1 Function Point.