**Function Point (FP) Estimation Method:**

**Functions:**

1. Currency Converter
2. Sale Tax Calculator
3. Tip Estimator
4. Map
5. Weather
6. Trip Planer
7. Local Service Number

**Determine function category count:**

Total count 44

1. Number of user input:

Counts: 11

* Function A:
  + Amount needed to be converted
* Function B:
  + Amount needed to be calculated
* Function C:
  + Original amount
* Function D:
  + Destinations (max 5)
* Function E:
  + N/A
* Function F:
  + Title
  + Time
  + Place
* Function G:
  + N/A

1. Number of user output:

Counts: 9

* Function A:
* Converted amount
* Function B:
  + Calculated amount
* Function C:
  + Suggested tip
  + Total amount
* Function D:
  + Suggested route
  + Time
* Function E:
  + Temperature
* Function F:
  + Reminder
* Function G:
  + Service number

1. Number of user queries:

Counts: 9

* Function A:
* Select “from” currency
* Select “to” currency
* Function B:
* Select city
* Function C:
  + 3 service survey questions
* Function D:
  + Selection of by car/walk
* Function E:
  + N/A
* Function F:
  + Alert option
* Function G:
  + Select Service

1. Number of data files and relational tables

Counts: 6

* Function A:
  + Real-time currency API
* Function B:
  + Sale tax API
* Function C:
  + Tip calculation API
* Function D:
  + Google Map API
* Function E:
  + Weather API
* Function F:
  + Local data files
* Function G:
  + Google Map API

1. Number of external interfaces

Counts: 9

* Function A:
* General UI page
* Currency selection UI page
* Function B:
  + General UI page
* Function C
  + General UI page
* Function D
  + Map UI page
* Function E
  + Weather page
* Function F
  + Table view
  + Detailed view
* Function G
  + Service number table view

**Determine complexity:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Function Category | Count | Complexity | Count \* Complexity |
| 1 | Number of user input | 11 | 4 | 44 |
| 2 | Number of user output | 9 | 4 | 36 |
| 3 | Number of user queries | 9 | 6 | 54 |
| 4 | Number of data files and relational tables | 6 | 15 | 90 |
| 5 | Number of external interfaces | 9 | 10 | 90 |

**Compute gross function point:**

GPF = 44 + 36 + 54 + 90 + 90 = 317

**Determine processing complexity (PC):**

1. Does the system require reliable backup and recovery?

2 - moderate

1. Are data communications required?

5 - essential

1. Are there distributed processing functions?

2 - moderate

1. Is performance critical?

4 - significant

1. Will the system run in an existing, heavily utilized operational environment?

5 - essential

1. Does the system require online data entry?

5 - essential

1. Does the online data entry require the input transaction to be built over multiple screens or operations?

3 - average

1. Are the master files updated online?

2 - moderate

1. Are the inputs, outputs, files, or inquiries complex?

2 - moderate

1. Is the internal processing complex?

1 - incidental

1. Is the code designed to be reusable?

4 - significant

1. Are conversion and installation included in the design?

1 - incidental

1. Is the system designed for multiple installations in different organizations?

4 - significant

1. Is the application designed to facilitate change and ease of use by the user?

5 - essential

**Compute processing complexity adjustment (CPA):**

PCA = 0.65 + 0.01 \* (PC1 + … + PC14) = 1.1

**Compute function point (FP):**

FP = GFP \* PCA = 317 \* 1.1 = 348.7 FP

**Estimated effort:**

E = FP / productivity = 348.7 / 40 = 8.7175 ~= 9 person-weeks

**Project duration:**

D = E / team size = 9 / 8 ~= 2 weeks