|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Function Category |  | Complexity | | | Count x Complexity |
| Count | Simple | Average | Complex |
| 1 | Number of user input | 8 | 3 | 4 | 6 | 24 |
| 2 | Number of user output | 5 | 4 | 5 | 7 | 20 |
| 3 | Number of user queries | 6 | 3 | 4 | 6 | 18 |
| 4 | Number of data files and relational tables | 100 | 7 | 10 | 15 | 1000 |
| 5 | Number of external interfaces | 5 | 5 | 7 | 10 | 25 |
|  | | | | | GFP | 1087 |

1)

**Assumption:**

The complexity for each of these is simple except number 4 (average).

Team size = 10

Productivity = 60

**Calculation:**

GFP = 8x3 + 5x4 + 6x3 + 100x10 + 5x5 = 1087

PCA = 0.65 + 0.01(5+4+4+3+3+3+2+3+2+3+3+3+4+3) = 1.1

FP = GFP x PCA = 1087 x 1.1 = 1195.7

E = FP/productivity = 1195.7 / 60 = 19.9283 = about 20 person-weeks

D = E/team size = 20/10 = 2weeks

**Project Cost Chart**

|  |  |  |
| --- | --- | --- |
| Component | Software/Tool | Cost |
| Front End | Android Studio, IOS | $ 1000 |
| Back End | MongoDB, PG Admin, DataBricks | $ 10000 |
| Cloud Services | AWS | $ 5000 |
|  | Total Cost | $16000 |

**Project Cost**

-This estimation is for the cost of software and training required to build the system. This was based on scalability and reliability. ​

-These tools were the most reliable because a lot of software developers use them for other projects. ​

-The most expensive one is AWS because the services are charging per hour or week. Since we need to use these services to prevent a failure, there was not any other cheap alternatives.