



SOFE 3490: Software Project Management - Lab 3

iPad Restaurant Application

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Basic Model:

Choosing an organic model because the project is less complex and the team size is small.

$$E=a(KLOC)^b$$

$$a=2.4$$

$$b=1.05$$

$$K = 2000$$

$$E=2.4(2)^{1.05}$$

$$E=4.97 \text{ Person-Months}$$

Intermediate Model:

Product Attributes:

Required Software Reliability- 1 Rate:3=3

Size of Application Database- 1 Rate:1=1

Complexity of the product- 0.85 Rate:1=0.85

Hardware Attributes:

Runtime Performance Constraints-1 Rate:2=2

Memory Constraints-1 Rate:2=2

Volatility of the virtual machine environment-1.11 Rate:3=3.33

Required turnabout time-0.94 Rate:3=2.82

Personnel Attributes:

Analyst Capability-0.86 Rate:3=2.58

Applications Experience- 1 Rate:2=2

Software Engineer Capability- 0.7 Rate:3=2.1

Virtual Machine Experience- 1.21 Rate:1=1.21

Programming Language Experience- 1.14 Rate:1=1.14

Project Attributes:

Application of Software engineering methods- 1 Rate:1=1

Use of Software Tools- 0.91 Rate:2=1.82

Required development schedule- 1.1 Rate:3=3.3

EAF=30.15

$E = a(KLOC)^b * EAF$

$= 4.97 * 30.15$

E=149.84 PM

Associated Risks

- **Bad Interface** - An interface can define the customers experience and so during development, it is necessary to make the interface of the restaurants menu simple and easy to navigate.
- **Security Flaws** - It is possible for the application and database to be hacked, and to prevent this we would have specialists intentionally hack to see the vulnerabilities and try to improve the security.
- **Bad Optimization** - The application for the restaurant menu on ipad can be simple and easy to navigate, but if it is laggy and takes too long to process the order it can cause the customer to have a bad experience. To prevent this, we can do certain tests during the development stage to make sure the application is optimized. Furthermore, we can use the customer ratings and reviews to solve any issues customers might have.
- **Order Processing** - We can't have customers ordering one item and receiving another. We need to make sure that when the customer selects an item, that same item shows up selected in the database. We can implement tests for all items to make sure every item is processed.
- **Employees may lack productivity:** Run strict recruitment process and put together a rigorous training program before beginning the project to avoid unnecessary delays