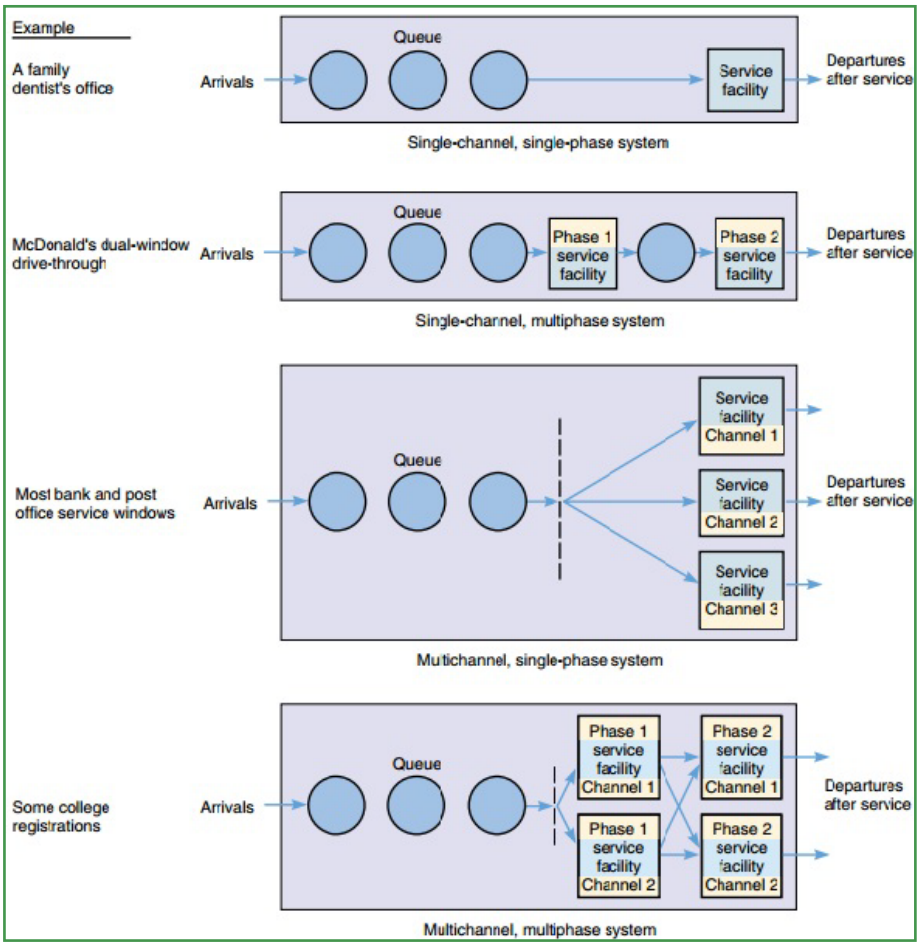

Figure 3. Basic Queuing System Designs

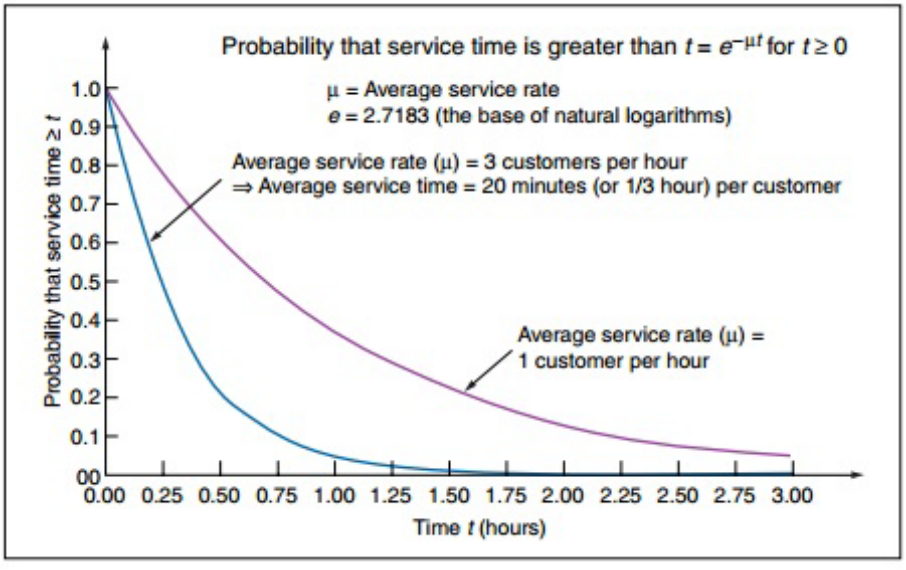

Figure 4. Two Examples of the Negative Exponential Distribution for Service Times

By using the following formula the utilization of system and waiting time spent in the queue by customer could be easily worked out.

$$N = N_q + N_s$$

```
}


}

/*****************************************************
************************
Function to generate exponentially distributed RVs
Input: x (mean value of distribution)
Output: Returns with exponential RV
*****************************************************
************************/
double expntl(double x)
{
double z; // Uniform random number from 0 to 1

// Pull a uniform RV (0 < z < 1)
do
{
z = ((double) rand() / RAND_MAX);
}
while ((z == 0) || (z == 1));

return(-x * log(z));
}
```

3.4. Implementation

Implementation is the stage of the project when the theoretical design is turned out into a working system. Thus it can be considered to be the most critical stage in achieving a successful new system and in giving the user, confidence that the new system will work and be effective (See Figure-6).

The implementation stage involves careful planning, investigation of the existing system and it's constraints on implementation, designing of methods to achieve changeover and evaluation of changeover methods.

4. Conclusion

This paper proposes a novel pricing demand scheme designed for a cloud based environment that offers querying services and aims at the maximization of the cloud profit with predictive demand price solution on economic way of user profit. The proposed solution allows: on one hand, long-term profit maximization with price minimization on request of same demand, and, on the other, dynamic calibration to the actual behavior of the cloud application.

Figure 6. Components of a Queuing System

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