**Chapter No.4**

**Development And Implementation**

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**Development And Implementation**

“The process of transferring the purposed system into an executable program according to design specification is called development”

The conversion of manual processing system into a computerized system requires the development of computer program that consist of a convenient framework of steps.

The most complicated and time consuming job of development phase is code; debug and test and hence has to do appropriate job according to the input and out put requirement of the system to give better compatibility with proposed system.

“The process of assuring that the system is an operational and then allowing user to take over its operations for the use and evaluation is called implementation”.

From the technical point of view the implementation is crucial step, which simply involves creating compatible files, training the operating staff and installing the hard ware. After the implementation performance of the system is also evaluated.

Development and implementation phase can summarized as collection of the following steps.

1. Development of computer programs
2. Implementation and testing of computer program.
3. Training personnel

**4.2 Development**

The development phase has been divided in the following steps.

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**4.2 Tool Selection**

Many problems are faced while understanding the working of existing system. Then thought about the compatibility of different software packages or languages with the solution of the problems, including PHP and Mysql. Hence after long careful consideration, it is decided that windows XP is operating system of choice where computers are concerned as a single user or multi user machines. It is decided to develop the management system of shangrilla cuisine for this operating system. In order to develop the soft ware,Mysql4 is used to develop the back end while PHP Xamp Server technologies are used to develop the program interface and user interface that is front end programming languages that is becoming the language of choice for programs that need to run efficiently and accurately, PHP has evolved into an extremely powerful application development too, takes a lot of complexity out of programming for the windows environment.

**4.2.2 Program Coding**

The process of conversion of the of the algorithm steps into the instructions according to some specified programming language is called coding. The following terms of action are adopted for writing well structure programs.

1. The programs module should be simple and straight forward.
2. The data names and labels used should be relevant and meaningful.
3. All the inputs, outputs data statement and program specifications should be in their respective groups so that users can feel easy to update and error detection.

**4.2.3 Testing of Software**

The objective testing the software is to determine whether the software satisfies the requirement of the user or not . it will surely not satisfy some requirement s if it still contain errors. Testing is done through out system some of them are explained below.

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**4.2.3.1 System Testing**

This is applied on the software to ensure that the software has been operated according to its desired requirement or not. In case of software failure, all necessary changes have to be done in software in order to get required results. This test checks the size and structure of data fields using actual data and also flow of test data.

**4.2.3.2 Unit Testing**

In unit testing each and every module of the software has been tested independently from the other using test data. This test is actually conducted to find errors like calculations. Data formats, I/O comparisons and so forth.

**4.2.3.3 Testing Strategies**

There are two strategies adopted mostly for the system testing, which are as follows.

1. Code testing
2. Specification testing

**4.2.3.3.1 Code Testing**

In code testing the logic of entire software has been tested and results are checked in time and again to ensure 100% success during its run.

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**4.2.3.3.2 Specification Testing**

In this strategy, first the software specification is examined as what the software should do and how it do under various conditions. Then different test cases have been developers and each of them is applied to confirm the performance of the requirements.

**4.3 Implementation**

There are several implementation option available that will reduce the risk of any mishap in the new system. There are five methods for implementation

1. Direct implementation
2. Parallel implementation
3. Pilot implementation
4. Modular prototype implementation
5. Distributed implementation

**4.3.1 Direct Implementation**

In this method of implementation, manual system is entirely replaced by the system. Then the presently working system is abandoned end the new system becomes complete operational on the real world

**4.3.2 Parallel Implementation**

This method allows us to compare the manual and newly engineered system both systems run simultaneously: merits and demerits of both are observed. If new system five some faults then these are removed while the old system continues to run. The old system abandon, if new system is working properly.

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**4.3.3 Modular Prototype**

This approach of implementation uses the building of modular, operational prototype to change the old manual system to newly computerized system is gradual manner.

**4.3.4 Distributed Implementation**

This type of implementation refers to a situation in which many installation of the system are contemplated, as is the case in banking,

**4.3.5 Adopted Implementation**

Keeping in view all the five methods of implementation, parallel implementation methods seems to be most suitable in this case because it is the safest in case of loosing any record as any record as any record lost in the computerized system will be available in the register that are mainted manually.

**4.5 Training Personal**

Training personal is the most frequently overlooked aspect of system implementation. The development of that newly computerized system are responsible for that. The personal often hesitate to face something new also with so many fears of technology. No matter how good a system is.It will be useless if people are not able to use. Hence a good training must be planned carefully to overcome such natural fears and hesitations.

This software is quite user friendly, so any authorized person can obtain the required information efficiently from the database after only a few hours of training and practice. However the comprehensive lectures provide better understanding about this new system. But the documentation will provide a lot of help to understand the software.

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