

# **Tutorial 3**

## **System Analysis – Fact Gathering**

## **Question 1**

A major project is currently about to enter the Requirements Analysis stage where managers, operators and customers will be asked about their requirements for the new system. The project team is currently reviewing the fact gathering techniques available for identifying, prioritising and agreeing to these requirements.

1. Briefly describe **THREE (3)** advantages of interviewing users, particularly at their workplace, to determine their requirements.

**Overcome Resistance**. Provides an opportunity to meet and overcome user resistance. It gets

cooperation of people involved and giving them the feeling of having made a substantial

contribution towards the design of new procedure.

**Clarify Facts Face-to-face interview** allows the interviewer to react to anything the interviewee says. If surprising or confusing statements are made, the interviewer is free to pursue the topic with additional questions immediately in order to verify and clarify the confusing facts. You can also observe the respondent's voice inflection and body motions, which may tell you more than words alone.

**Build Rapport**. The interview provides the analyst with the opportunity to build rapport with the user. The analyst will often require the cooperation, support and enthusiasm of the user throughout the whole project. The face-to-face interview is an excellent opportunity to develop the rapport that will be the necessary foundation of a good working relationship.

**Intimate and Frankness.** People who would be unwilling to put critical or controversial comments in writing talk more freely in person. You can probe with open-ended questions that people would normally balk at answering on paper.

1. Briefly describe **THREE (3)** circumstances where questionnaires are an appropriate method of investigating users’ requirements.

Large number of users. There may be insufficient time to interview all the possible users of the system. Consequently, it may be decided to interview a sample of users and to get the requirements of the rest through questionnaires.

Geographically distributed users. It is time-consuming and expensive to interview users who are widely geographically distributed. The cost of collecting their views and requirements probably outweighs the insights they will give. In such circumstances it may be appropriate to interview a small number of users and then send a carefully constructed questionnaire to the rest.

Anonymity. In some circumstances the analyst may wish to collect information whose accuracy would be enhanced if the provider of the information remains anonymous. For example, information on the effectiveness of management, or the efficiency and service of an internal IS department. Questionnaires provide a confidential way of gathering

Factual information. The analyst will need answers to factual questions about locations, volumes and processes. For example, how many invoices are raised every day? Factual information requires the user to investigate rather than respond with instant answers and such questions are particularly appropriate to questionnaires.

1. An analyst is planning an interview with a user about his requirements for a new system. He has identified the participants in the interview. Briefly describe **THREE (3)** **other aspects** that should be included in the interview plan.

Carrying out hackground research-A research must be carried out about the interviewee background, for example: job they perform, roles, responsibilities, authority, position. These will allow the interviewers to prepare some relevant questions.

Read previous documentation referring to the project. It is important that the analyst is familiar with the history of the project to date and with any specific technical terms used by the participants.

Prepare some relevant questions - The interviewers must prepare interview questions related to the issues or problems raised (in System Request form). The suggestions to solve the problems, the main objectives of the system, services or improvements requested can also be used for preparation of the interview questions.

Make appointment - After done the above, the interviewers must make an appointment with the interviewees and discuss items such as: time, location (venue), dates, agenda (objectives), duration of the interview session.

## **Question 2**

A software system is to be developed to automate various operations of a library in an institute of higher learning. This system will cover various functions including, borrowing, returns, fines, reservations, renewing, browsing, searching and querying facilities. It will be used by the library staff, book borrowers and readers.

For the facilities mentioned above, identify and describe **TWO (2)** most important **non-functional** requirements.

Interfaces with other systems

Very few software solutions are self-contained. There is an increasing need for applications to receive data from one system and to supply it to another. A library system may have to import information about new students and students leaving the college from a Registration system and export budget requirements to an accounts system for cash flow forecasting. Some of these interfaces may also be with generalised software packages, such as spreadsheets or specialised tools for data mining

Audit requirements

Most software solutions require some sort of audit trail. This trail records significant information about particular transactions. For example, in a library system, the writing-off of old books by a librarian might be recorded on an audit trail. This is a significant transaction and may be the target of fraudulent use. For example, a library might issue purchase order to buy own books. An audit trail for this function might include the date and time of change or transaction, the previous book details, the new book details, the employee-ID of the user making the change and the workstation-reference.

Archiving, backup and recovery

Backup and recovery routines are often part of the Operating System. However, some users are uncomfortable about coming out of the environment of the package to undertake these essential tasks with an Operating System which can be difficult to use. Archiving may also be required because performance can degrade as more and more ransactions are stored. Backup and recovery facilities would further make the system able to recover when system encounters problems.

## **Question 3**

“Interviews and questionnaires are two of the popular fact finding techniques used to understand users’ requirements during the analysis phase.” Discuss **TWO (2)** major differences between these two techniques.

| **Differences** | **Interviews** | **Questionnaires** |
| --- | --- | --- |
| 1. Method | F2F | Non F2F |
| 1. Before | Question | Questionnaire send to respondents |