



Dear Parents / Students

Due to the unprecedented situation, Knowledgeplus Training center is mobilized and will keep accompanying and supporting our students through this difficult time.

Our Staff will be continuously, **sending notes and exercises on a weekly basis** through **what's app and emails**. Students are requested to **copy the notes and do the exercises** on their copybooks.

The answers to the questions below will be made available on our website on knowledgeplus.mu/support/psp/week1.php by 27th March 2020.

Please note that these are extra work and notes that we are providing our students and **all classes will be replaced during the winter vacation**.

We thank you for your trust and are convinced that, together, we will overcome these troubled times

Proficiency in Software Package – Week 1

Fact Finding techniques

Fact finding is process of collection of data and information based on techniques which contain sampling of existing documents, research, observation, questionnaires, interviews, prototyping and joint requirements planning. System analyst uses suitable fact-finding techniques to develop and implement the current existing system. Collecting required facts are very important to apply tools in System Development Life Cycle because tools cannot be used efficiently and effectively without proper extracting from facts. Fact-finding techniques are used in the early stage of System Development Life Cycle including system analysis phase, design and post implementation review. Facts included in any information system can be tested based on three steps: data- facts used to create useful information, process- functions to perform the objectives and interface- designs to interact with users.

Interview

Interview is the most commonly used technique to collect information from the face-to-face interviews. The purpose of interview is to find, verify, clarify facts, motivate end-users involved, identify requirements and gather ideas and opinions. The role of interview includes interviewer who is system analyst and interviewee who are system owner or user. Interviewing technique needs good communication skills for interaction between system analyst and user.

There are two types of interviews.

Unstructured interviews

An interview that is conducted with only a general goal or subject in mind and with few, if any, specific questions. Open-ended questions type is used in unstructured interview that allows user to answer freely in an appropriate way.

Structured interviews

Structured interview is an interview which contains predefined set of questions. In structured interview, close-ended questions type is used to limit answers to specify choices, short and direct responses from the interviewees.

Advantages of Interviews

By motivating interviewees, they have confident to answer the questions more effectively. System analyst can examine the more feedbacks from the interviewees. System analyst can prepare questions for interviewees to be more suitable or change the questions for every individual. System analyst can know the nonverbal communications of interviewees by perceiving the body movements and facial expression.

Disadvantages of Interviews

Interviewing is time consuming and costly mechanism in fact-finding technique. Moreover, the communication skills of the system analyst affect the success of interview.

Questionnaire

It is the technique used to extract information from number of people. This method can be adopted and used only by a skilled analyst. The questionnaire consists of series of questions framed together in logical manner. The questions are simple, clear and to the point. This method is very useful for attaining information from people who are concerned with the usage of the system and who are living in different countries. The questionnaire can be mailed or send to people by post. This is the cheapest source of fact finding.

Advantages of Questionnaires

People can fill the forms and give answers freely to the analyst. This technique is inexpensive. Users are more willing to response real answer as they do not need to give their personal information. Responses can be calculated and analysed quickly.

Disadvantages of Questionnaires

Incomplete answers will be received from users. Analyst cannot observe the body language of user responses. Analyst has no chance to define vague or incomplete responses. Good questionnaires are difficult to prepare.

Record View

The information related to the system is published in the sources lie newspapers, magazines, journals, documents etc. this record review helps the analyst to get valuable information about the system and the organization.

Observation

Unlike the other fact finding techniques, in this method the analyst himself visits the organization and observes and understand the flow of documents working of the existing system the users of the system etc. For this method to be adopted it takes an analyst to perform this job as he knows which points should be noticed and highlighted. An analyst may observe the unwanted things as well and simply cause delay in the development of the new system.

Theory questions

1. Give three differences between High Level Language and Low Level Language.
2. List down 3 translators.
3. Give 2 differences between Compiler and Interpreter.
4. Convert the following:
 - a) Binary to Decimal
 - I. 11001011
 - II. 11100011
 - b) Decimal to Binary
 - I. 197
 - II. 252
 - c) Binary to Hexadecimal
 - I. 10100111
 - II. 11001100
 - d) Hexadecimal to Binary
 - I. FB_{Hex}
 - II. CC_{Hex}
5. Draw the logic gates of the following circuits.
 - $(AB)' + C$
 - $A'B + (B+C)'$
 - $(AB)(BC)$
 - $(A' + B) + C'$

6. A letter is sent home to parents of pupils who are going on a ski trip. Describe how mail merge techniques can be used to send individual information to each parent.
7. Describe two ways in which computer technology has changed teaching in school.
8. RAM and ROM are two type of computer memory. Explain two differences between them.
9. What is meant by video-conferencing?
 - Describe one benefit of video conferencing
 - Describe one drawback of video conferencing.
10. Explain what is E-Commerce
 - Give one advantage of using E-Commerce
 - Give one disadvantage of using E-Commerce