

JOBSHEET 1

DEFINE THE PROBLEM/ OPPORTUNITY



Disusun oleh:

**Program Studi Teknik Informatika
Jurusan Teknik Elektro**

**POLITEKNIK NEGERI SEMARANG
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a. Duration

4 hours (2 credits)

b. Objective

After completing this course, student can be able to:

1. Recognize that problem or opportunity exists
2. Gather the project development team
3. Assess the initial feasibility
4. Develop a plan for proceeding

c. Theory

System is influenced by various factors. System require internal and external information/data for to processing functions. In order to analyze the system, someone need understand both problem and requirements in detail. In this step the analyst sums up the requirements of the system from the user and the managers. The developed system should satisfy these requirements during testing phase.

The system analyst collects data about the system to be developed. He uses different tools and methods, depending on situation. These are:

1. Written Documents:

The analyst may collect the information/data from written documents available from manual-files of an organization. This method of data gathering is normally used if you want to computerize the existing manual system or upgrade the existing computer based system. The written documents may be reports, forms, memos, business plans, policy statements, organizational charts and many others. The written documents provide valuable information about the existing system.

2. Interviews:

Interview is another data gathering technique. The analyst (or project team members) interviews, managers, users/ clients, suppliers, and competitors to collect the information about the system. It must be noted that the questions to be asked from them should be precise, relevant and to the point.

3. Questionnaires:

Questionnaires are the feedback forms used to collect Information. The interview technique to collect information is timeconsuming method, so Questionnaires are

designed to collect information from as many people as we like. It is very convenient and inexpensive method to collect information but sometimes the response may be Confusing or unclear and insufficient.

4. Observations:

In addition to the above-mentioned three techniques to collect information, the analyst (or his team) may collect Information through observation. In this collect technique, the working, behavior, and other related information of the existing system are observed. If there are large numbers of people or events involved in The system, we can use sampling method to collect information. In this method, only a part of the people or events involved are used to collect information. For example to test the quality of a fruit, we test a piece of the fruit.

d. Tools and Materials

In gathering information to determine a problem and capture an opportunity, several tools can be used as a reference in gathering information, such as:

1. Laptop or Personal Computer
2. Android smartphone with camera
3. Microphone
4. Microsoft Office
5. Audio recorder

e. Instruction

In this practicum, students are formed into several groups, 1 group consists of 3 or 4 people. Then do some activities such as:

1. Look for problems in the surrounding environment, such as on campus, residential areas, rural or urban areas.
2. Do a collection of problems an opportunities by location survey, interviews, Questionnaires and Observations
3. Preparations for interview :
 - a) Choose a setting with little distraction. Avoid loud lights or noises, ensure the interviewee is comfortable (you might ask them if they are), etc. Often, they may feel more comfortable at their own places of work or homes.
 - b) Explain the purpose of the interview

- c) Address terms of confidentiality. Note any terms of confidentiality. (Be careful here. Rarely can you absolutely promise anything. Courts may get access to information, in certain circumstances.) Explain who will get access to their answers and how their answers will be analyzed. If their comments are to be used as quotes, get their written permission to do so. See getting informed consent.
 - d) Explain the format of the interview. Explain the type of interview you are conducting and its nature. If you want them to ask questions, specify if they're to do so as they have them or wait until the end of the interview.
 - e) Indicate how long the interview usually takes
 - f) Tell them how to get in touch with you later if they want to.
 - g) Ask them if they have any questions before you both get started with the interview.
 - h) Don't count on your memory to recall their answers. Ask for permission to record the interview or bring along someone to take notes
4. Use Basic rules for questionnaire item construction:
- a) Use statements which are interpreted in the same way by members of different subpopulations of the population of interest.
 - b) Use statements where persons that have different opinions or traits will give different answers.
 - c) Think of having an "open" answer category after a list of possible answers.
 - d) Use only one aspect of the construct you are interested in per item.
 - e) Use positive statements and avoid negatives or double negatives.
 - f) Do not make assumptions about the respondent.
 - g) Use clear and comprehensible wording, easily understandable for all educational levels
 - h) Use correct spelling, grammar and punctuation
 - i) Avoid items that contain more than one question per item (e.g. Do you like strawberries and potatoes?)
5. Record the results in the form of documents can recognize that problem or opportunity exists

f. Assignment

Each group collects the results of collecting problems and opportunities in the form of documents in tabular format. The collection of documents, i.e.

1. Problem/opportunity definition
2. Initial feasibility review and recommendation
3. Project plan

g. Summary (Optional)

Through this practicum we discuss the problems that arise around us and we try to observe these problems. The end result we can find solutions to these problems and capture the opportunities that arise from existing problems. The resources to collect the data are an essential of system. Some fact findings methods are an important part here.

h. Tasks performed by group members

