

WORK DESIGN AND ANALYSIS
IE 441
LABORATORY MANUAL

LAB – 1

PROCESS CHARTING








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LAB # 1 PROCESS CHART

Objective:

The objective of this assignment is to give you some practice with Charting techniques.

The table below shows the symbols that used in process chart.

Symbol	Title	Description
	Operation	A main step, where part, material or product usually modified or changed. Occurs when an object is intentionally changed in one or more of its characteristics.
	Transport	Occurs when an object is moved from one place to another e.g. movement of people or things. May be accompanied by a distance measurement.
	Delay	Occurs when the immediate performance of the next planned action does not take place e.g. idle time of people or machines, or temporary storage of materials.
	Storage	Controlled storage in which material is received into or issued from a store, or an item is retained for reference purpose e.g. storage of materials or other items.
	Inspection	Occurs when an object is examined for identification or is compared with a standard e.g. checking of items to ensure correct quality or quantity.

Combined symbol: - Two symbols may be combined when activities are performed at the same work place or when they are performed concurrently as one activity. For Example the large circle within square  represents a combined operation and inspection. Put the main activity outside.

Lab exercise

You can choose to do one of the work place listed below (see the list of example work places), or do one you think up on your own. Either

Examples of work places:

1. Engineering college canteen: process to get the breakfast or lunch from canteen.
2. Dr. Cafe coffee shop – process to get coffee from the shop.
3. Central library – process to issue book to student from library.
4. Grocery store – process chart for local grocery stores.
5. Panda shop – process for purchasing any item form panda.
6. Jarir book store – process for purchasing book form jarir book store.

How to do it: -

1. Identify the process to be charted and the objective for charting it.
2. Identify the symbol set to be used.
3. Record the steps of the process as it happen, starting at the top of the page, with symbols on the left overlaying a vertical line with appropriate notes about what is happening to the right. Try to record significant activities which are generally of approximately equal size (unless the problem is at the detail level, do not try to capture too much detail).

You can also make the diagram more useful by such tricks as numbering the different action types in sequence. You can also put the time taken in each activity to the left of the symbol.

4. If you are watching the process as it happens, you may want to repeat the analysis several times to ensure you have captured the normal chain of events.
5. Analyze the final chart, for example totaling times taken in non-value-adding activities such as storage, movement and inspection.

Format for Lab Report:

Cover Page is Title page in any format.

- Introduction to process charting advantages – 5 to 7 lines.
- Process chart for Present Method.
- Discussion (5-7 lines) – analyze the present method and write recommendation
- Conclusion – what you concluded from after analysis.