TYPES OF TEXT

Read the text samples below and decide which type of text they represent.

Abstract
Extract of a textbook
Instructions
Lab/test report
Manual
Process description
Project plan

Text sample 1:

How to Install a Hard Drive on Your Laptop

1. Turn off the **laptop.**
2. Unplug the AC adapter.
3. Prepare your work area. ...
4. Remove the battery.
5. Ground yourself before touching the old **drive**, and again before opening the bag or box that holds the new **drive.** ...
6. Locate the **hard disk drive** compartment or bay.

Text sample 2:

The thesis was done for Company X' service's Plant Automation team. The purpose of the thesis work was to produce training material and documentation for the Company's main business units. The Company has begun to use segmented networks and next generation firewalls in its power plant control systems. Because most Company's commissioning engineers and service personnel are specialized in automation or electrical engineering, they might not have necessary knowledge and expertise to handle possible challenges that the new advanced network and its equipment brings. This has created demand for training material and documenting common cases, to help configure firewalls and troubleshoot network problems.

The thesis included studying the Company's control system network and its devices. The HMI of the control system is the Company's Operators Interface System, OIS. OIS receives data via Ethernet from devices and visualizes it for the operator. The network is designed to be modular, so that it can be copied to new sites using the same basic setup, with modifications depending on the power plant size. The IEC 62443 standard set parts are applied to the network design, so that it meets cyber security requirements. The standards consist of segmenting the network into zones with a different trust classification.

The tests were done by simulating standard control system network, using similar layouts and firewalls. The network traffic was simulated using Modbus/TCP-client/server. The syslog server and Wireshark were used for analyzing and troubleshooting.

Text sample 3:

DESIGN

- Power transformers are tailor-made to the client's specifications
- International standards and electrical safety regulations are complied with.
- The design is verified by simulation.

CONSTRUCTION

- Power transformers are manufactured from high-grade materials: the core is made of steel the windings of copper and the insulation of cellulose-based paper.
- The windings are wound and steel plates are laid by hand.
- The transformer is tested when it is finished.

CURING AND IMMERSION

- The windings and the cellulose are cured.
- The air is removed with a vacuum process.
- The windings and the core are immersed in oil because the oil has a better dielectric strength.

TRANSPORTATION

- The transformers are transported by road, by rail even by air.

COMMISSIONING

- The acceptance test is performed at the factory.
- The manufacturer installs or supervises the installations.
- The commissioning is done by the buying utility.

Text sample 4:

The PLC in automation technology

1.1 Introduction

The first Programmable Logic Controller (PLC) was developed by a group of engineers at General Motors in 1968, when the company were looking for an alternative to replace complex relay control systems. The new control system had to meet the following requirements:

- Simple programming
- Program changes without system intervention (no internal rewiring)
- Smaller, cheaper and more reliable than corresponding relay control systems
- Simple, low cost maintenance

Subsequent development resulted in a system, which enabled the simple connection of binary signals. The requirements as to how these signals were to be connected were specified in the control program. With the new systems it became possible for the first time to plot signals on a screen and to file these in electronic memories. Since then, three decades have passed, during which the enormous progress made in the development of microelectronics did not stop short of programmable logic controllers. For instance, even if program optimization and thus a reduction of required memory capacity initially still represented an important key task for the programmer, nowadays this is hardly of any significance.

Moreover, the range of functions has grown considerably. Not that many decades ago process visualisation, analogue processing or even the use of a PLC as a controller, were considered as Utopian. Nowadays, the support of these functions forms an integral part of many PLCs.
The following pages in this introductory chapter outline the basic design of a PLC together with the currently most important tasks and applications.

Text sample 5:

Temperature and Pressure Measurements of an Ideal Gas That Is Heated in a Closed Container

Introduction

This report discusses an experiment to study the relationship of temperature and pressure of an ideal gas (air) that was heated in a closed container. Because the ideal gas was in a closed container, its volume remained constant. The objective of the experiment is to test whether the ideal equation of state holds. In the equation,
$$pV = mRT,$$
where p is the pressure the gas, V is the volume, m is the mass, R is a constant, and T is temperature. This report presents the procedures for the experiment, the experiment's results, and an analysis of those results.

Procedures

In this experiment, air (an ideal gas) was heated in a pressure vessel with a volume of 1 liter. Attached to this pressure vessel was a pressure transducer and thermocouple to measure the pressure and the temperature, respectively, of the air inside the vessel. Both of these transducers produced voltage signals (in Volts) that were calibrated to the pressure (kPa) and temperature (K) of the air (the atmospheric pressure for where the experiment occurred is assumed to be 13.6 psia). In addition, the theoretical temperature (K) of air was calculated as a function of the measured pressured values (kPa).

Results and Discussion

This section analyses the results of the experiment. The experiment went as expected with no unusual events that would have introduced error. The voltages as measured for the pressure and temperature transducers appear in Table A-1 of the Appendix. Also included in the Appendix are the equations used for calibrating those voltages with the actual pressures and temperatures. These equations led to the values of pressure and temperature that are shown the third and fourth columns of Table A-1. From these values, a graph between temperature (K) and pressure (kPa) was created (Figure A-1). As can be seen from the graph, the relationship of temperature versus pressure is roughly linear.

Text sample 6:

GOALS AND OBJECTIVES

Business Goals and Objectives

The business goals and objectives for this project will focus on implementing mobile technology that:

- Improves officer, firefighter and citizen safety.
- Facilitates coordination and information sharing both internal and external to the participating organizations.
- Enhances the ability and effectiveness of staff to perform their jobs.
- Facilitates coordinated crime prevention and reduction.
- Provides high levels of data security.
- Provides an open, flexible, reliable technology base for the future.
- Facilitates the electronic capture of data at its source.
- Is easy to use.
- Eliminate redundant data entry throughout the organization.

Project Goals and Objectives

Sample project goals and objectives:

- Ensure that end users have input into the design process.
- Accomplish project business goals and objectives within defined budget and time parameters.
- Minimize impact to standard business operations within the affected units.
- Craft a favorable and secure agreement between the Department and the selected vendor.

Text sample 7:

Introduction

Thank you for selecting the HP Personal Media Drive. This drive is an external hard disk drive with a large capacity designed to quickly and easily store and transfer media files such as digital photos, music, video, and other important files.

The HP Personal Media Drive connects and disconnects easily from a USB 2.0 connector on the front or back of most PCs.

For some HP PCs, the HP Personal Media Drive is designed to fit inside a horizontal or vertical drive bay.

Your HP Personal Media Drive comes with backup software (select models only) that is compatible with most Microsoft® Windows® Operating systems.

Safe Handling Information

The HP Personal Media Drive is designed to be used as a stationary unit. It is very important that you handle this drive carefully to avoid hardware damage and data loss. Please read the following warnings before attempting to install, use, or move your HP Personal Media Drive.

Care and Handling of Your HP Personal Media Drive

⚠ **WARNING: The warnings for the care and handling of the HP Personal Media Drive are listed below.**

- Do not move the drive while it is operating to avoid hardware damage and potential data loss. You can safely move your drive only when you have properly disconnected and powered off the drive through the operating system.
- When running for long periods of time, the aluminum case of the Personal Media Drive may become very warm. This is part of the HP Personal Media Drive's advanced design and is completely normal.
- The built-in, low-noise fan is designed to automatically turn on at pre-set temperatures. If you are using the HP Personal Media Drive connected externally to your PC, please place the drive in a well-ventilated area.
- Do not move the PC with the HP Personal Media Drive attached to a USB port, or while inserted into specially designed HP PC drive bays.
- Incorrect handling, such as dropping the drive, can cause data loss and invalidates the warranty.
- Do not attempt to open the drive's case. This action voids the warranty.
- Do not set the drive on its side, as it may fall over and cause damage.
- Do not remove any cables or power cords without properly disconnecting the drive through the operating system.
- Do not set any liquids or drinks on the drive. Liquids can damage the internal electronics.
- Do not block airflow around the drive while the drive is turned on.
- Do not stack anything on top of the drive; this can