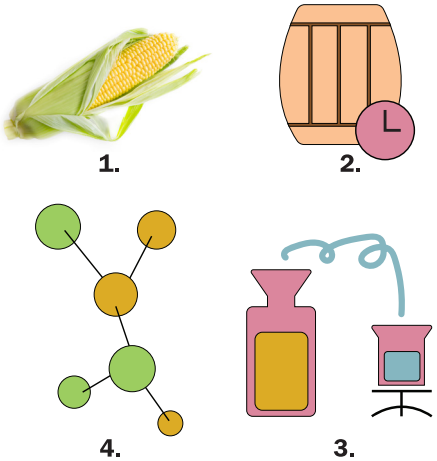
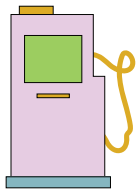
CONTROL SYSTEMS

EMBEDDED CONTROL SYSTEMS

CONCEPT Embedded control systems consist of hardware and software components working together to monitor, control and optimize the manufacturing process. They are typically embedded within the machinery and equipment used in the manufacturing process, allowing for real-time control and monitoring of various parameters, such as temperature, pressure, speed and motion.



1. Crop
2. Fermentation
3. Purification
4. Ethanol
5. Blending
6. Transportation
7. Fuel Station



REAL WORLD CONNECTIONS

One example of embedded control systems in Nebraska is the production of ethanol, which is an important industry in the state. Ethanol production involves a complex manufacturing process that requires precise control of several parameters, such as temperature, pressure and flow rate.

Embedded control systems are used in ethanol production to monitor and control these parameters, ensuring the process operates efficiently and produces high-quality ethanol. For example, temperature sensors are used to monitor the temperature of the fermentation tanks, while flow sensors are used to monitor the flow rate of the ethanol and other liquids.

Microcontrollers and digital signal processors are used to process the data from these sensors and adjust the process as needed. Human-machine interfaces allow operators to monitor the process in real-time and make adjustments as needed.

powered by:

Nebraska Public Power District
Always there when you need us