

Problem segmentation: Divides the project into smaller tasks and parts. For example, when designing a . bridge, the project is divided into materials selection, load calculations, and construction methods. Pattern Recognition: Recognizes patterns in previous designs. For example, he may notice common weaknesses in previous bridge designs. Abstraction: Simplifies the system into basic models. For example, it creates a simplified model of a bridge to analyze its strength. Algorithmic Design: Develops algorithms to control systems or processes. For example, he creates algorithms for automated manufacturing systems. Example: When designing a new bridge, breaks the design down into structural components, recognizes patterns in previous bridge designs, creates a model to analyze the structure, and uses algorithms to simulate loads