AI-13

Expert systems (ES) are one of the prominent research domains of AI. It is introduced by the researchers at Stanford University, Computer Science Department.

## What are Expert Systems?

The expert systems are the computer applications developed to solve complex problems in a particular domain, at the level of extra-ordinary human intelligence and expertise.

### Characteristics of Expert Systems

* High performance
* Understandable
* Reliable
* Highly responsive

## Capabilities of Expert Systems

The expert systems are capable of −

* Advising
* Instructing and assisting human in decision making
* Demonstrating
* Deriving a solution
* Diagnosing
* Explaining
* Interpreting input
* Predicting results
* Justifying the conclusion
* Suggesting alternative options to a problem

They are incapable of −

* Substituting human decision makers
* Possessing human capabilities
* Producing accurate output for inadequate knowledge base
* Refining their own knowledge

## Components of Expert Systems

The components of ES include −

* Knowledge Base
* Inference Engine
* User Interface

Let us see them one by one briefly −

