Assignment 6

Expert System

⇒ **Objective:** To implement an Expert System

⇒ **Problem Statement:** Implement any one of the following Expert System:

1. Information Management
2. Hospitals & medical facilities
3. Help desks management
4. Employee performance evaluation
5. Stock market trading
6. Airline scheduling & cargo schedules

⇒ **Software and Hardware requirements:**

- Operating system: 64-bit open source Linux or its derivative
- Programming Tools: Java/Scala/R/Python

⇒ **Theory:**

An Expert System is a computer program that is designed to solve complex problems and to provide decision-making ability like a human expert. It performs this by extracting knowledge from its knowledge base using the reasoning and inference rules according to the user queries.

The expert system is a part of AI, and the first ES was developed in the year 1970, which was the first successful approach of artificial intelligence. It solves the most complex issue as an expert by extracting the knowledge stored in its knowledge base. The system helps in decision making for complex problems using both facts and heuristics like a human expert. It is called so because it contains the expert knowledge of a specific domain and can solve any complex problem of that particular domain. These systems are designed for a specific domain, such as medicine, science etc.

The performance of an expert system is based on the expert's knowledge stored in its knowledge base. The more knowledge stored in the knowledge base, the more that system improves its performance. One of the common examples of an ES is a suggestion of spelling errors while typing in the Google search box.