KBS architectures

Knowledge Engineering Course

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What is a KBS architecture?

A KBS architecture consists of:

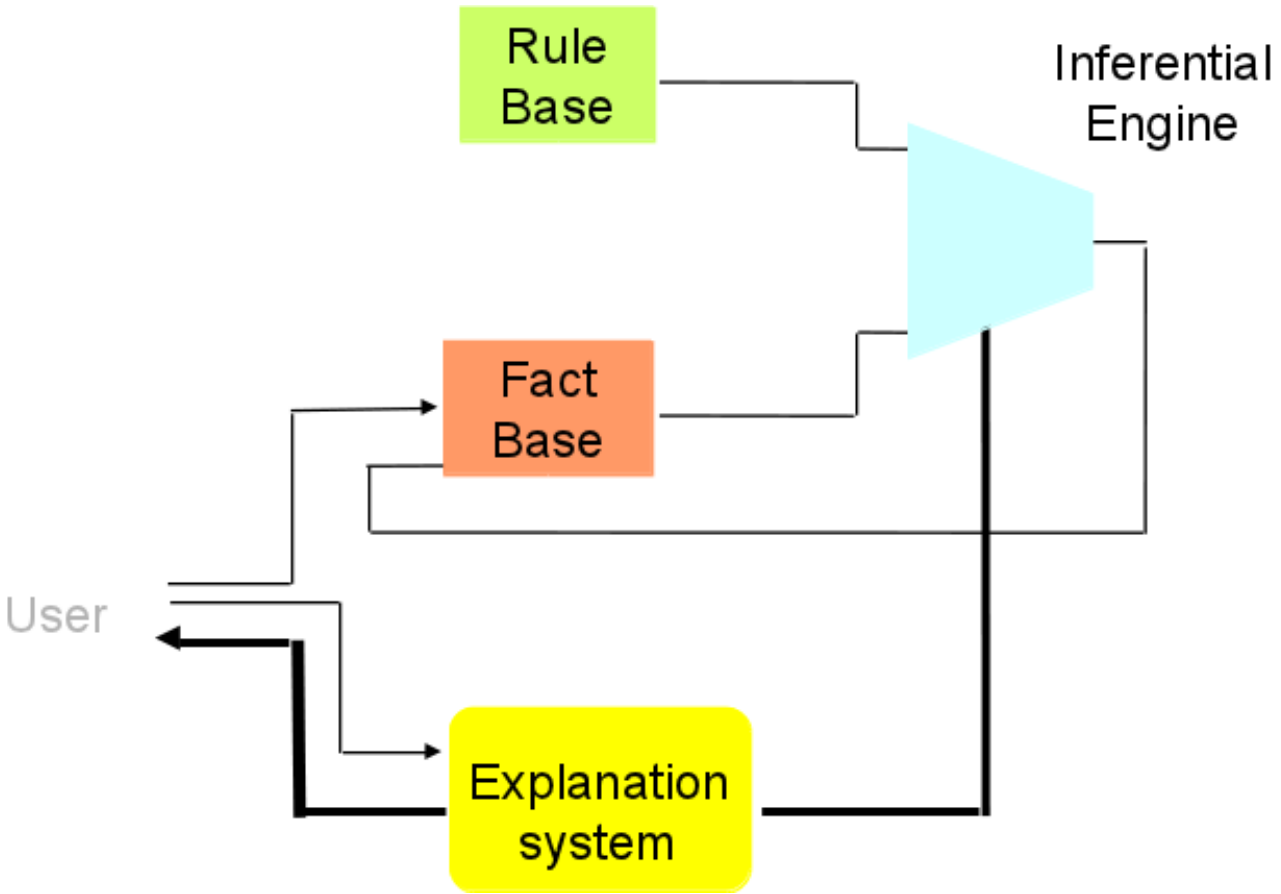
- Software modules implementing functionalities
- Interaction among modules
- Interaction with the external world

Software modules

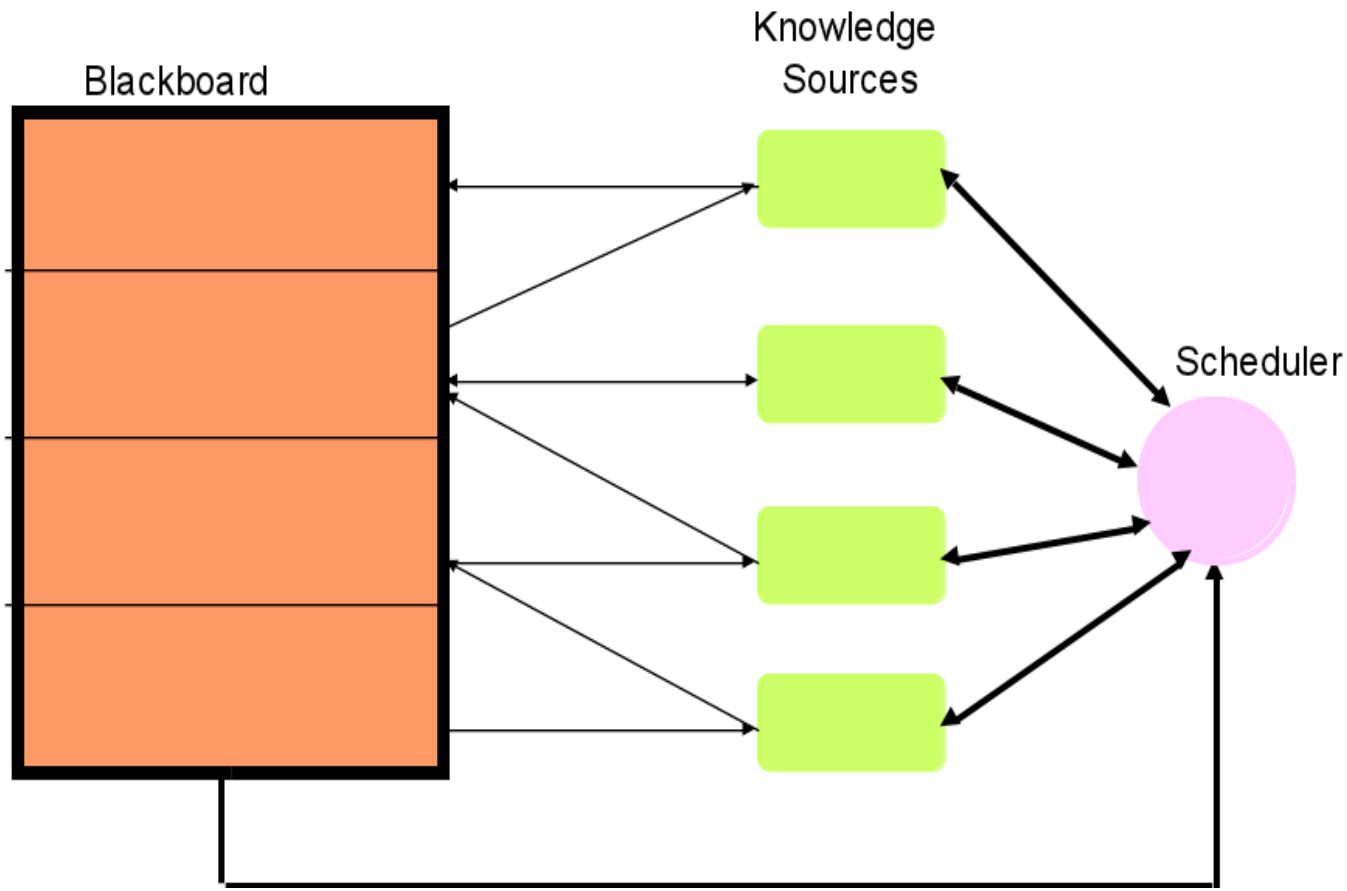
Some typical software modules are:

- The **Knowledge Base (KB)**, containing the knowledge acquired from the experts and other knowledge sources. When this is represented by rules, it is called **rule base**.
- The **Fact Base (FB)**, containing a representation of facts that describe the environment on which the KB has to work. In general, the activity of the system adds facts in the FB.
- The **Inferential Engine (IE)** that acts on FB with knowledge in KB to produce other facts to be added to FB. If the KB is made of rules, the IE may chain them either forward (e.g., for forecast applications) or backward (e.g., for diagnosis).
- The **Explanation System (ES)** that provides explanations about the functioning of the system, and justifications about the inferential activity.

The classical architecture



The blackboard architecture



The distributed architecture