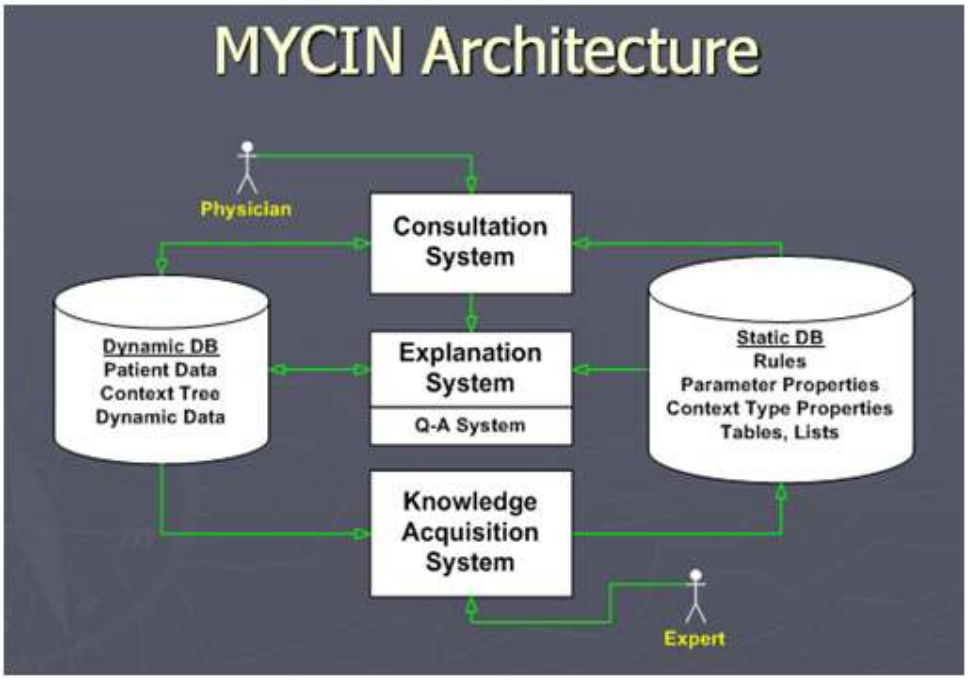
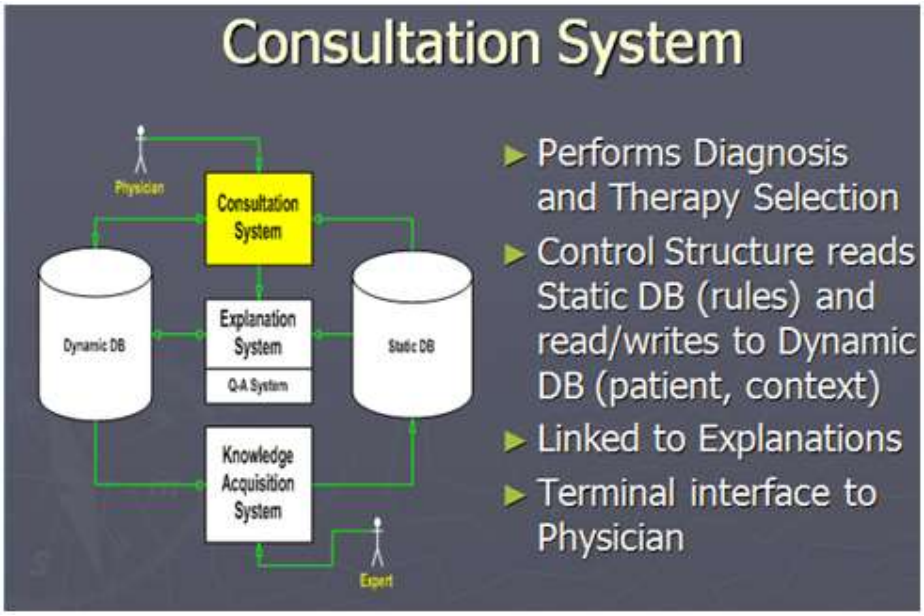
MYCIN

Mycin is a program that diagnoses infectious diseases. It reasons backward from its goal of determining the cause of a patient illness. It attempts to solve its goal of recommending a therapy for a particular patient by first finding the cause of the patient's illness. It uses its production rule4s to reason backward from goals to clinical observations. To solve the top-level diagnostic goal, it looks for rules whose right sides suggest diseases. It then uses the left sides of those rules (the preconditions) to set up sub goals whose success would enable the rules to be invoked . these sub goals are again matched against rules, and their preconditions are used to set up additional sub goals.

Mycin is a well known rule based deduction system. Its expertise lies in the domain of bacterial Infections. Physicians usually must begin antibiotic treatment for patient who have bacterial infections without knowledge exactly which organism is the culprit. There is no time to wait for definitive laboratory culture evidence, which accumulates too slowly. For the desperately sick, therapy must begin at once – not 2 days from can either prescribe a broad – spectrum drug that covers all possibilities , or she can prescribed a better, disease – specific drug.

Mycin helps the physician to prescribe disease – specific drugs. Mycin in-forms it self about particular cases by requesting information from the physician about a patient's symptoms, general condition. History, and laboratory – test results that can be obtained easily and quickly. At each point, the question mycin asks is determined by Mycin's current hypothesis and the answers to all previous questions. Thus, the questions start as though taken from a checklist, but the questions then vary as evidence builds.





Here is an except from a sample sessions:

What is the patient's Name ?

john Doe.

- Male or female?

Male

- Age ?

He is 55.

- Have you obtained positive cultures indicating general type ?

yes

- What type of inflection is it ?

Primary bacteremia

- When did symptoms first appear ?

May 5

- Let’s call the most positive culture CI. From what site was CI taken ?

from the blood.

- When ?

May 9

- Let’s call the first significant organism from this culture UI. Do you know identify of UI?

no

- Is UI a rod or a coccus or something else ?

Rod

- What is the gram stain of UI?

Gram negative.

- Have there been positive culture from sites that are not associated with the

inflections about which you are seeking advice?

No

As we proceed through the processing stages of compute vision. We will no doubt be impressed by the similarities and parallel one can draw between vision processing and natural language processing . The - sensor stage in vision corresponds to speech recognization language understanding, the low and intermediate processing levels of vision correspond to syntactic and semantic language processing respectively, and high level processing, in both cases corresponds to the process of building and interpreting high level knowledge structures.