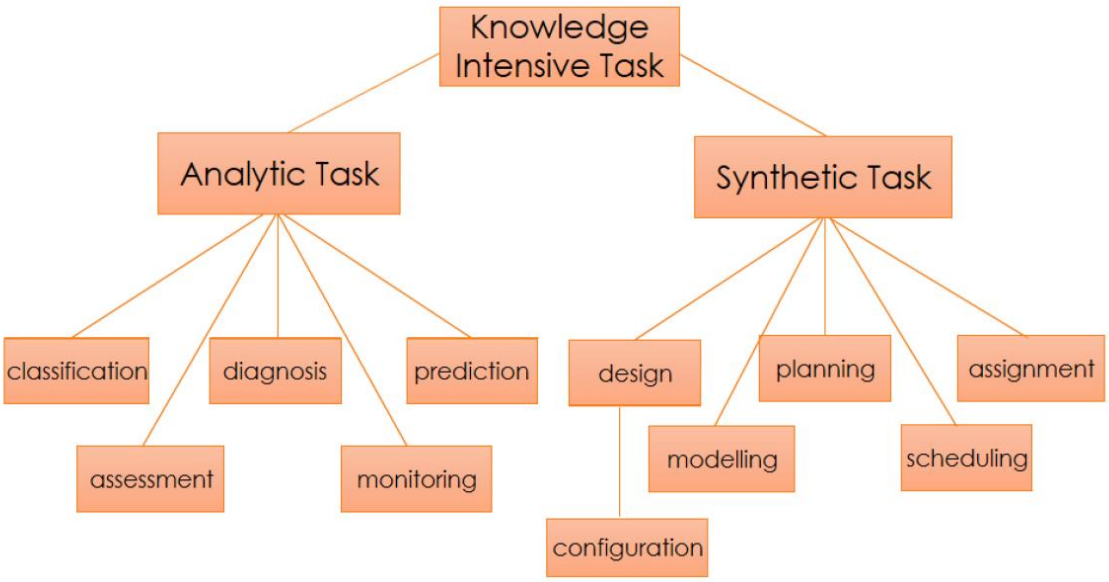
APPENDIX B:

Mapped system functionalities against knowledge, techniques and skills of modular courses



From MR course, two major knowledge intensive tasks are categorized. The SRA project actually combines Analytic Task and Synthetic Task. Pattern analyzing is the analytic part while bank product advisory belongs to the synthetic part.

1.4 KNOWLEDGE REPRESENTATION

Formal Logic – First Order Logic

[Example] You are investigating a case:

- **Given below known intelligence (and common sense):**
  1. Person "***Sam***" loves animals.
  2. Any person who loves animals does not kill an/that animal.
  3. All cats are animals

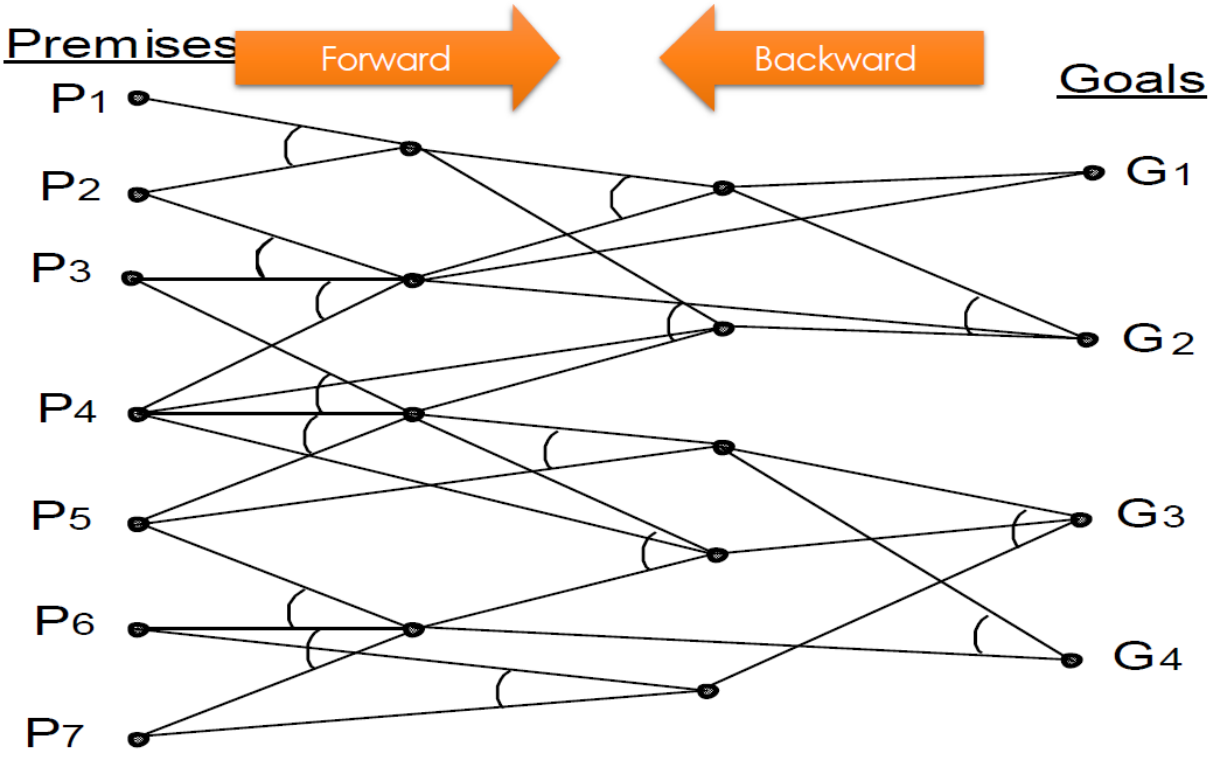
With First Order Logic in mind, rules have been extracted from natural language, frames, formulas and so on.

2.2 KNOWLEDGE MODELS (ACQUIRED → REPRESENTED)

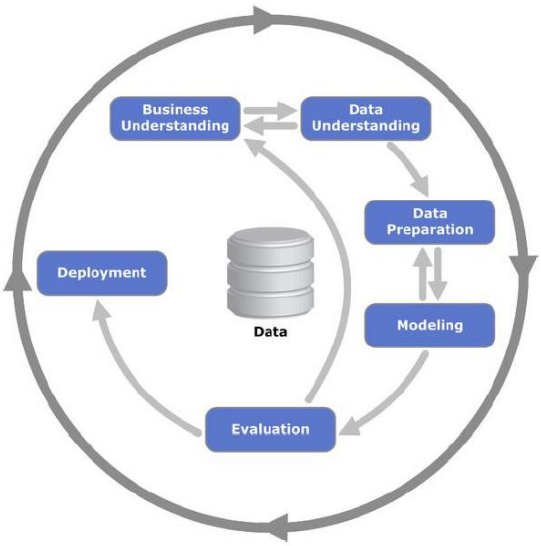
Rules & Decision Table **KIE Guided Rules; Decision Table**

Rule No.	Condition 1	Logical Operand	Condition 2	Sub-goal
F-1	franchise-fee ≤ threshold1	AND	royalty ≤ threshold2	Franchise = ok
F-2	franchise-fee ≤ threshold1	AND	royalty > 20% x franchise-fee	Franchise = not-ok
F-?	…	…	…	…

During knowledge modeling phase, rule tables are chosen to present the rules. This might be the best way to present the plenty of rules.



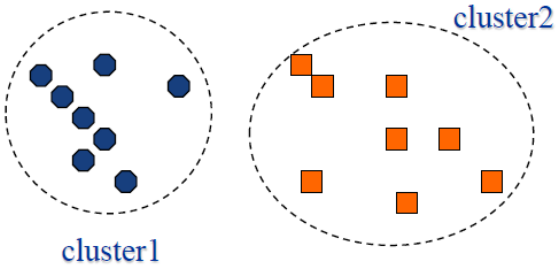
Forward chaining as well as its analyzing skills is applied to the project as there is no goal pre-set to the outcome.



CRISP-DM is applied during the analyzing phase. The data help us to understand more and the understanding also fine-tune the data.

Clustering: Definition

"Partition a database so that records that have similar characteristics are grouped together"



Clustering covered in Reasoning System course is also applied during the analysis phase. Which helped us successfully grouped all the bank products into 3 clusters.