**Appendix : Map System Functionality**

| **Courses Knowledge of Courses** | **System Functionality** |
| --- | --- |
| **Machine Reasoning**  ✓ Knowledge Acquisition  ✓ Knowledge Discovery  ✓ Knowledge Representation  ✓ Rule engine | o HR claim FAQs acquired for the chatbot.  o Receipts collected to find out how to extract the amount of the expenses.  o Claim policy as a decision table in the claim expenses system.  o How a claim is certified is studied and automated. |
| **Reasoning Systems**  ✓ Search Technique  ✓ Identified, integrate, decompose, reflect, design and create | o Dialogflow Intent Detection and Fulfilment  o Search the OCR processed text for expense amount  o Business use case was identified, designed and decomposed into chatbot, OCR and expense claim system and are integrated to be a complete solution. |
| **Cognitive System**  ✓ NLP tasks  ✓ Computer Vision | o WhatsApp Chatbot Development and Intent Detection using Dialogflow.  o OCR for receipt detection and recognition. |