CHAPTER 3

3.1 This chapter focuses on the system architecture of the AshesiBot and a broad view of the system. The chapter defines the environment in which the AshesiBot operates and its components. AshesiBot software architecture describes how a system is organized.

The diagram below shows the architecture of AshesiBot chatbot system:

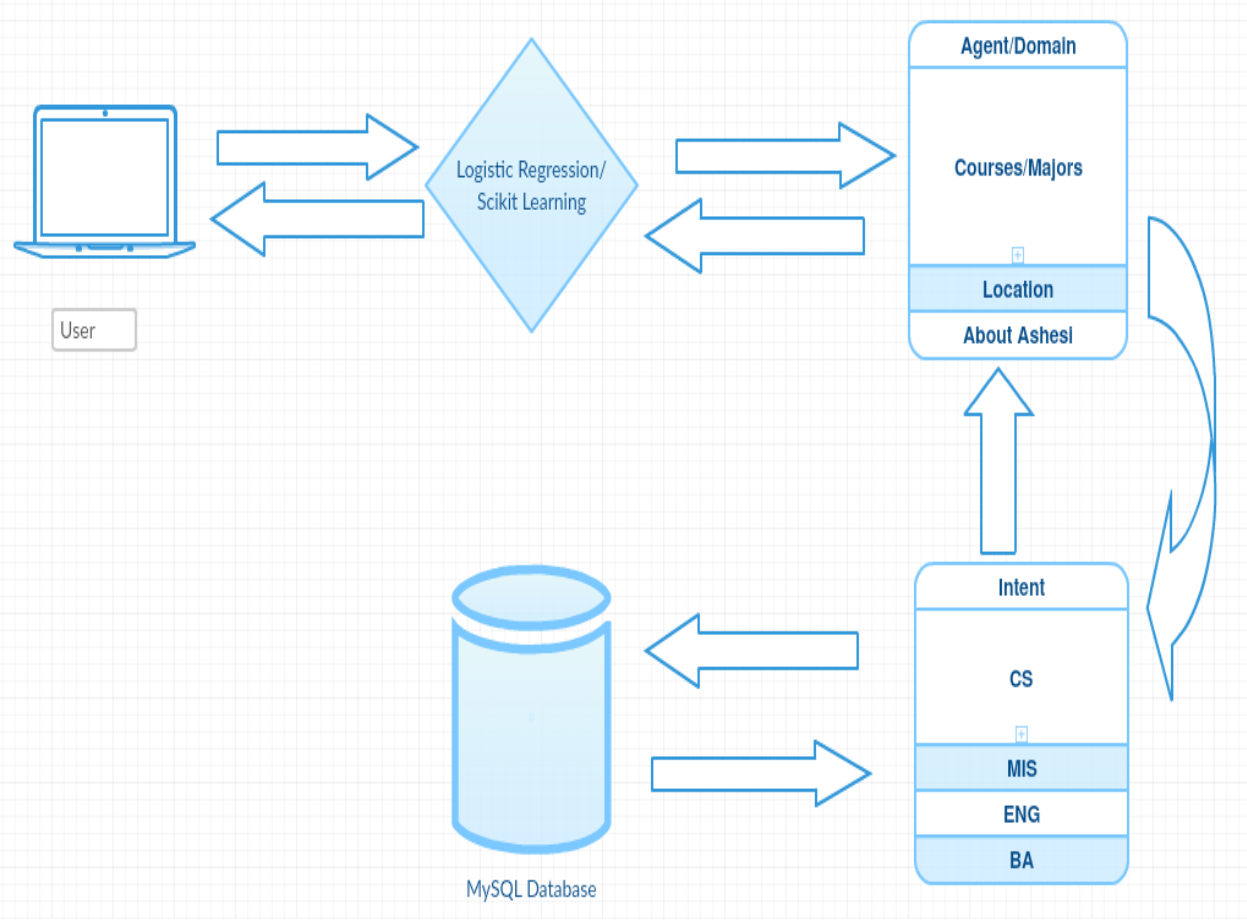

Fig. 3.1 AshesiBot Software Architecture

This architecture is build using the three-layer architecture which allows each layer to be maintained independently from each other. The three-layer architecture consists of the presentation layer, functional process logic and storage layer.

3.2 The diagram below shows the presentation layer for AshesiBot that receives input from user and display response from the chatbot:

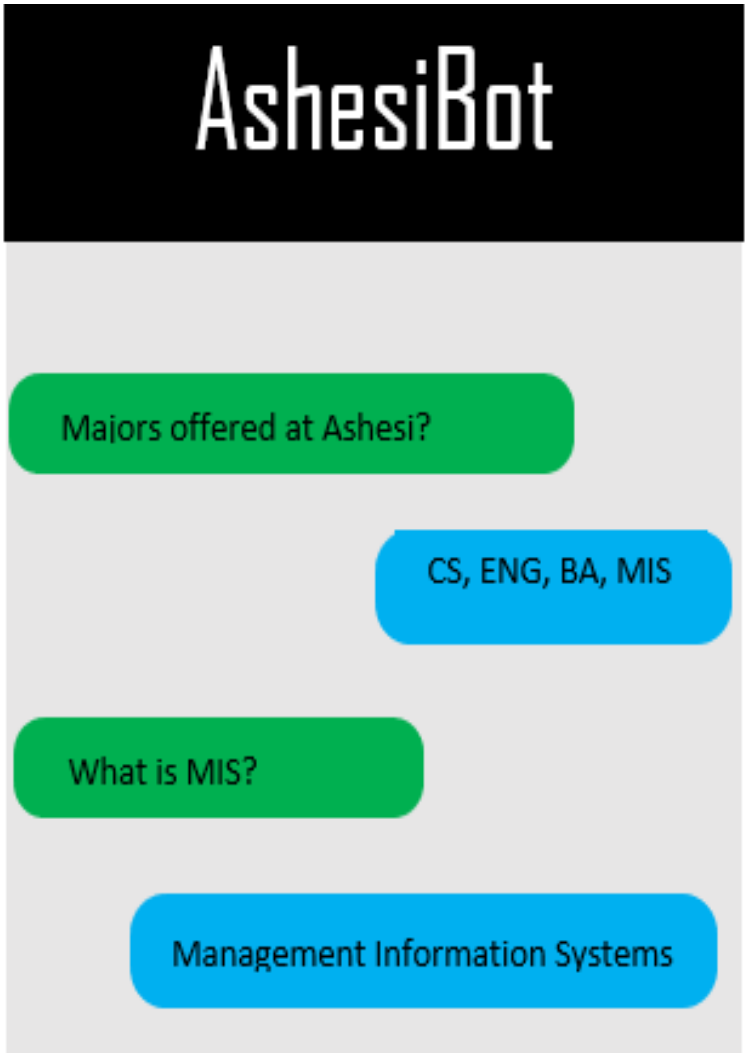

Figure 3.2 Presentation layer

The second layer in the 3-layer architecture is the functional process logic. This layer is in charge of matching the user input to a domain and intent it belongs to and retrieve the domain response needed to meet the user requirement. The functional process logic is also referred to as the application layer.

3.3 The diagram below shows the application layer:

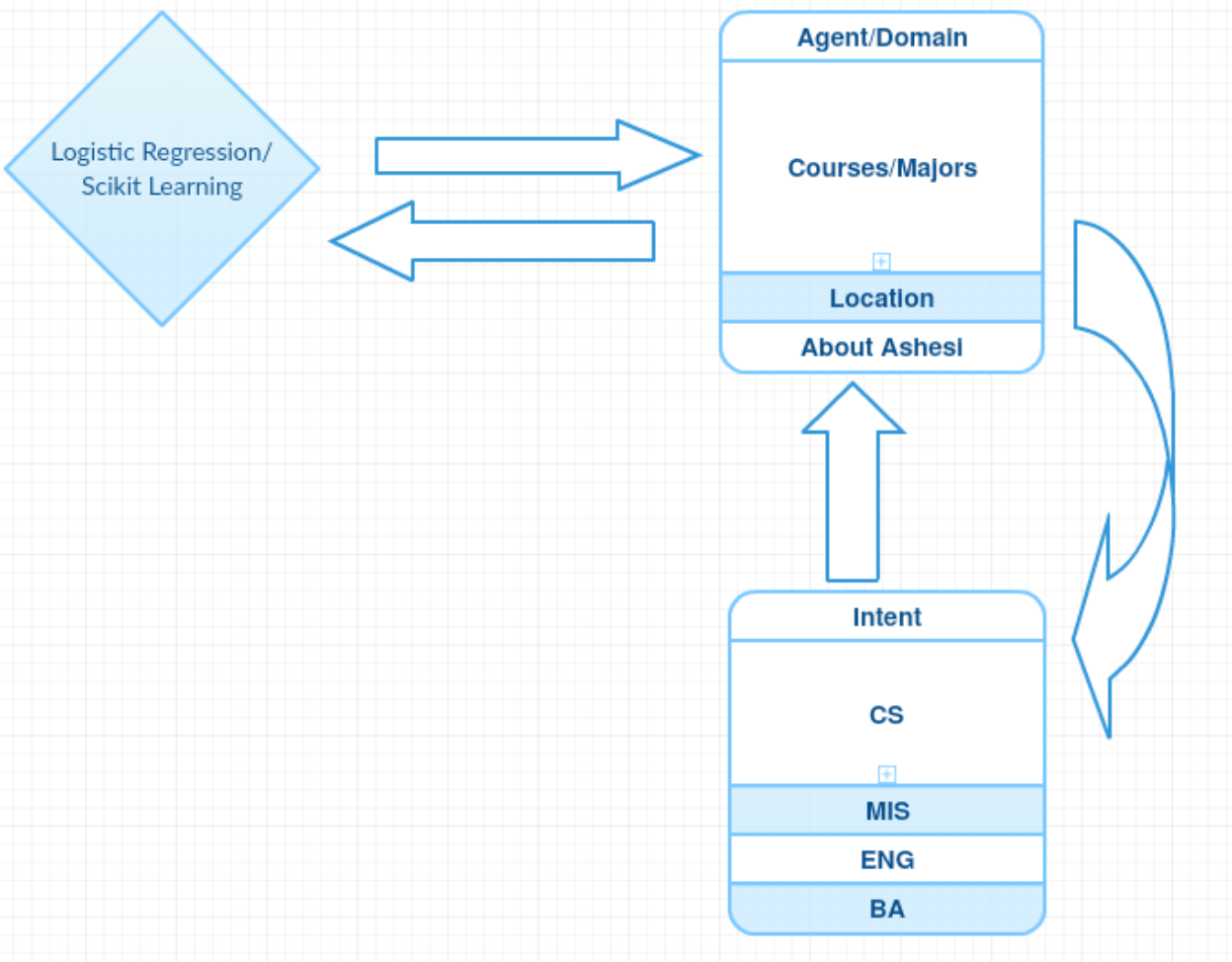

Figure 3.3

Agent/ Domain is the category in which a user input fall under. Intents are different categories of user's intentions in a domain. Machine learning algorithms are implemented to classify the domain and intent of each input to ensure correct outcome.

Database Layer:

3.4 This layer is the that independently stores the data. The database design diagram is below:

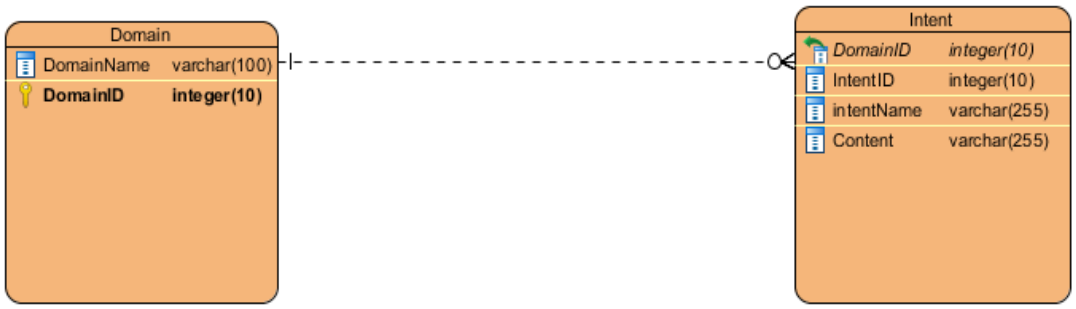
Domain
DomainName varchar(100)
DomainID integer(10)
Intent
DomainID integer(10)
IntentID integer(10)
intentName varchar(255)
Content varchar(255)

Fig 3.4