CHAPTER 3
RESEARCH METHODOLOGY

3.1. Literature study stage

At this stage, the collection of journals is carried out to assist in finding ideas that match the parking system to be made, in order to see the differences and similarities in each journal.

3.2. Data collection stage

In the data collection stage, the ultrasonic sensor values are taken from each car that enters the parking area.

3.3. Design and implementation stage

At this stage is the stage of selecting tools and materials such as sensors and microcontrollers that support the creation of a parking monitoring system and selecting the algorithm that will be used during implementation, for this project using an Arduino at Mega microcontroller, using ultrasonic sensors to measure the height of the incoming car, and at each parking slot using the LDR module and also using the dijkstra algorithm to calculate the closest rarity in the existing slots.

3.4. Test stage

At this test stage, testing of the existing system will be carried out, whether it is in accordance with the planned design or not. As in this system, it will be tested with a toy car, the ultrasonic sensor will capture the height of the car and the system will direct it to the appropriate slot that is still available and closest.