**Problem Statement:**  
  
Theft Detection System is an IoT application using a Raspberry Pi comprises of a buzzer, a camera module, Wi-Fi module and sensors. The system

has an active mode and a standby mode. Depending on these modes, the buzzer is activated to indicate “theft”. The purpose of this system is to

solve a real-world issue while also paying close attention to energy consumption and efficiency. A basic theft detection system would comprise

of a sensor aimed at an object where the sensor triggers an alarm. To optimize the same, we implement a camera over a sensor and through

image manipulation detects the object. This allows us to save the images taken, thereby giving us more information.

**CEP Statement**

The students should apply Object Oriented programming approach using Python. The coding of the Raspberry Pie must include the pillars of

OOPs (i.e., Inheritance, Polymorphism). The framework must use the OpenCV library for camera images and minimum 2nd generation Raspberry

pi having camera module 5 MP or above with fixed focus lens. At least 5 piezoelectric sensors are used with a distance of 6 cm from each other.

To send the images over the internet ESP8266 Wi-Fi module is used with python built-in library.

Pre-Requisite:

Computer Programming

Basic Electronics