Assignment No - 06

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AIM: Understand the connectivity of Raspberry Pi Beagle board with a zigbee module write a network application for communication between two devices using zigbee.

Theory: Zigbee is a communication device used for the data transfer between the controllers; computers systems really anything with a serial port As it work with low power consumption the transmission distances is limited to 10-100m line of Sight Zigbe devices can transmit data over long distance by passing data comm through a mesh network of intermediate devices to reach more distance ones Zigbee is typically used in low data rate application that require long battery life and secure networking Its main application are in the field of wireless sensor network base of on industries as it requires short range low rate wireless data transfer the technology defined by either the Zigbee specification is less expensive than networks and intended to be simpler than other wireless networks.

/ Here we make use of an interface of Zigbee with Raspberry Pi 2 for a proper wireless communication Rasberry Pi 2 has 4 USB Ports so

it bel is better to use a Zigbee Dongle for this interface. Now we can want to check the communication between two paired ZigBee modules.

Python Script to Perform Zigbee communication

```
import Serial

# Enable USB communication
ser = Serial. Serial ('/dev/HyUSB'9 600,timeout=1

while True:
    ser.write('Hello USB cal xln')
    incoming = ser.readline ()  . strip ()
    print. 'Received Data : + incoming
```

Conclusion : Thus we have done Zigbee communication between two Raspberry Pi devices.