

**Design & Development of IoT Application**

**Using Raspberry Pi2 and ThingSpeak**

**A Practical Approach**

**(Experimental Manual for B.Tech& M.Tech students)**

**For System on Chip and Embedded Systems**

**In association with Microsoft**



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### LIST OF EXPERIMENTS

<b>Exp No.</b>	<b>Description of Experiment</b>
<b>Exp. 1</b>	To understand what is cloud, its importance, usage, services and types of Cloud.
<b>Exp. 2</b>	To familiarize with ThingSpeak and understand the procedure of creation of a Channel over ThingSpeak.
<b>Exp. 3</b>	To understand the procedure of MATLAB analysis of a ThingSpeak Channel.
<b>Exp. 4</b>	To understand the procedure of MATLAB visualization of a ThingSpeak Channel.
<b>Exp. 5</b>	To understand the procedure of scheduling the MATLAB analysis code of a ThingSpeak Channel.
<b>Exp. 6</b>	To understand the integrated procedure of creation, analysis, scheduling and visualization of a Channel.
<b>Exp. 7</b>	To upload DHT11 sensor data to ThingSpeak channel through Raspberry pi2.
<b>Exp. 8</b>	To upload Light sensor (TSL) data to ThingSpeak channel through Raspberry pi2
<b>Exp. 9</b>	To read Light Sensor data from ThingSpeak channel and store it into database through Raspberry pi2.