

# Micro bit Level - 1

## **1. Getting Started - Microbit.**

### 1.1. What the Robotics?

1.1.1 Introduction to Technology

1.1.2 Machines and Automation

1.1.3 Favours of Robotics

### 1.2. What is Microbit.

1.2.1. What can we do with it.

1.2.2. What components come with the kit

1.2.3. What devices does it support?

### 1.3. Programming

1.3.1. Introduction to MakeCode editor.

1.3.2. UI based programming

1.3.3. Online program simulation

### **1.4. Project: My Micro-PET.**

## **2. Inputs and Outputs.**

### 2.1. Inputs

2.1.1. Buttons

2.1.2. Sensors

2.1.3. Communication Interfaces

### 2.2. Outputs

2.2.1. Lights

2.2.2. Extensions

2.2.3. Motors

### 2.3. Programming Logic

2.3.1. Conditions

2.3.2. Loops

2.3.3. Logic development

### **2.4. Project: Tilt-To-Fill (2 hours)**

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### **3. Magic with Math**

#### 3.1. Coordinate system

3.1.1. What are coordinates

3.1.2. How to locate them

3.1.3. How to navigate

#### 3.2. Blinky

3.2.1. Integrate conditions with coordinates

3.2.2. Integrate loops with coordinates

3.2.3. Understand parallel loops

#### 3.3. Gesture control

3.3.1. Navigate Blinky with gesture

3.3.2. Turn Blinky into Snake

3.3.3. Make EGG for the Snake to eat

#### **3.4. Micro-Snake Game**

