System Layered   
Architecture

for

Communication Application using USART

Version 1.0 proposed

ITI Embedded Systems Track – Intake 40

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**Communication Application using USART**

1. **System Layered Architecture**

The system architecture consists of 3 layers over the Microcontroller, (Figure 1.0) each layer provides some APIs to abstract the upper layer from the lower layer to make it (the upper layer) independent on the lower layers, so that we can structure the project in a simple organized way.

**Msg Displaying**

**Runnable Tasks**

**Sending/Receiving  
Msgs**

**Switch  
Controller**

**Application Layer**

**ECU Abstraction Layer**

**LCD**

**Scheduler**

**USART Handler**

**Switch**

**RCC**

**SysTick**

**USART**

**NVIC**

**GPIO**

**Microcontroller Abstraction Layer**

**Microcontroller**

**Microcontroller**

(Figure 1.0)