Intel-IoT Training Program

Task given date: 04/01/2017

**Submitted by**

Venkatesh.P[14BEE205]

|  |  |
| --- | --- |
| **Arduino board** | **Specifications** |
| UNO | General purpose and begin to learn |
| LilyPad | Embedded with sensors especially for textiles. Also washable |
| Red board | Work on windows8 without modifying the security |
| Mega | Lots of i/o pins |
| Leonardo | Contains 20 digital i/o pins and 7-PWM, 12 analog pins |
| Due | 54 digital i/o pins, 12-PWM pins and 12 analog pins, 4 UART, 2 DAC, OTG capable |
| Yun | Built with wifi, Ethernet and SD card support |
| Ethernet | Ethernet serial interface |
| Fio | Xbee serial interface |
| Nano | For USB |

1. **Types of Arduino Boards and their applications**
2. **Microprocessor and micro controller manufacturers**

* Intel
* Texas Instruments
* Infineon
* Toshiba
* Epson
* Panasonic Industrial Conponents
* Holtek semiconductor Inc.
* Realtek semiconductor corp.
* Intersil
* Kawasaki LSI
* LSI corporation
* Aeroflex
* Ajile systems Inc.
* Analog devices (DSP manufacturer)
* ZF micro solutions Inc
* Zilog

1. **Specifications of Intel i7 processor**

There are 3 types of Intel i7 processors are available. They are

* Intel core i7-7700 processor
* Intel core i7-7700K processor
* Intel core i7-7700T processor

Specifications

Intel turbo Boost technology 2.0

Core - 4

Threads - 8

Base frequency - 3.60GHz

Max turbo frequency - 4.20GHz

Cache - 8

Power - 65W

Instruction set - 64 bit

Embedded options available

Conflict free

Built with intel data and platform protection Technology

Maximum memory - 64GB

Memory channel - 2

Processor Graphics - Intel HD graphics 630

Graphics base frequency - 350MHz

Graphics video memory - 64GB

1. **SLICE [Student Learn In Collaborative Environment]**

It is a software framework for developing pen based apps for Android and windows tablets. It was created by the researchers at university of Illinois, Urbana-Champaign.

1. **Ubuntu snap**

A ‘Snap’ is a universal Linux Package works on any distribution, server, cloud and device. Snaps are faster to install, Safer to run, easier to create and update automatically. Hence the app is always fresh and never broken. This community is working at snapcraft.io to provide a single publication mechanism for any software in any Linux environment

IoT gateways and smart edge devices benefit from secure updates

1. **ESP 8266**

It is a low cost Wi-Fi chip with full TCP/IP stack and MCU capability produced by Shanghai based Chinese manufacturer.

ESP8285 is an ESP8266 with 1MB of built in flash allowing single chip devices capable of connecting to Wi-Fi

It consists of 32 bit CPU, 10 bit ADC, 16 GPIO pins, WPA/WPA2 authentication etc.,

1. **Freeboard.io**

It is HTML based “engine” for dashboards.it provide plugin architecture for creating data sources and widgets

1. **MIT App Inventor2**

It is an open source Android app developer in online Provided by Google. The app developing using this is not difficult because the logic is created using puzzle patch manner.