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## **Arduino Training**

With the advent of Embedded Systems and the scope it has created for Engineers in the Industry, it has become necessary to have hardware based programing skills for engineering community at large. Having foreseen this, Karkhana offers training on Arduino based prototyping. Arduino is an open source electronics prototyping platform based on flexible, easy to use hardware and software. It is a widely used platform by hobbyist's engineers to solve problems and develop simple and effective low cost applications. The training is intended for students who are interested in implementing the basis of programing and learning the different electronics interfaces. The training will be conducted using the Arduino UNO platform based on ATmega 328 or ATmega8 Microcontroller.

## **COURSE CONTENTS**

- Introduction to Arduino Platform
- Introduction to basics of Programming
- Programming Concepts
- Conditional Statements
- Lab 1 Led blinking,
- Lab 2 LED Patterns
- Lab 3 Switches
- LCD Introduction
- Lab 4 LCD Interface
- Analog Concepts
- Interfacing Thermistor
- Mini Project Temperature Sensor
- o Serial Interface
- Data Acquisition System

#### **ELIGIBILITY**

• Students of 2<sup>nd</sup> year, 3<sup>rd</sup> year and final year Electronics, Biomedical, Electronics and Telecommunication, Electronics and Electrical Engineering, Electrical Engineering, Computer Science Engineering, Pure Science undergraduates of Computer Science & Electronics and Diploma.

## **COURSE OUTCOMES**

- Participants will be introduced to the Arduino Platform.
- Participants will be trained on Embedded C, implementation of analog and digital peripherals.
- Participants shall become ready to solve challenges from an industry based perspective.
- The training includes hands-on labs resulting in exploration of concepts.
- Upon successful completion of course, participants will get a Karkhana Certificate.

# **About Us**

# We are on a mission to build a better future both for the students and their beloved country. Our Story

"Techie Bairns" was born out of the desire to reach out to students who couldn't decide what to do next as a fresher. We have been endorsing in technologies in Bhubaneshwar since Our understanding with the students and nurturing their talent, backed with expertise is what makes us a vibrant team.

## What's with the name "Techie Bairns"

The word "Techie" is quite popular among everyone in and around us. "Bairn" whose colloquial translation is "kid". We wanted it something to be a one which is catchy and hence here it is "TECHIE BAIRNS".

# Services offered by Techie Bairns

Techie bairns provide a number of programs for the students which helps them in enhancing their technical skills.

- **Training:** We provide training for the students on various courses, which are need of the hour. During this training the students will be able to learn and interact with our expert instructor, who will be there to explain topics in a great detail and at the same time help with your problems and at the same time provide personalized study as you progress through the course.
- Workshop: Techie Bairns organises certain workshops for the students in order for them to increase their understanding level. Theoretical knowledge is not always enough so it would be better if the students get hands on experience with the course they are pursuing.
- **Project help:** Apart from all these we also provide help in creating projects for the students.
- Research and Development