Dalvik Apps
Design & Develop

wecan EDUCATION
WECAN EDUCATIONAL ORGANIZATION

Drone Training Program

INTRODUCTION:

A drone, in a technological context, is an unmanned aircraft. Essentially, a drone is a flying robot. The aircrafts may be remotely controlled or can fly autonomously through software-controlled flight plans in their embedded systems working in conjunction with onboard sensors and GPS. Drones can be controlled by remote control system or a ground cockpit. Drones come in a wide variety of sizes, with the large drone mostly used for military purposes such as the Predator drone, other smaller drones which can be launched by hand, to other unmanned aircraft which require short runways.
WE CAN EDUCATIONAL ORGANIZATION provides an industry grade training on nano-drones discussing about each aspect of hardware and software.

DURATION

- The workshop will be 14-16 hours duration.
- Participants will work individually, each student getting an opportunity to work hands-on.
- We Can Educational Organization shall bring the kits required for the training.

WHY to LEARN?

Learning a NEW Technology, Various sensors such as gyroscope, accelerometer, barometer and other related data sensors, motors, propellers and so, have their individual significance; but when these individual sensors combine, they can form an overall a different technology which can FLY. This new technology which can fly have already created Curiosity and Interest amongst kids to youngster to adults whether it is a student or professional or hobbyist and is always fun to learn.

Hands on Experience

Drones are like big LEGO sets. One can assemble parts or take them apart and then add additional parts later like cameras, sensors etc. The great part is one can choose what they have to incorporate as per there application. Some drones can be ordered ready-to-fly and require almost no effort to set up, while the more technical DIY kits require additional knowledge of Assembly of components (Controller, sensors, motors, etc.). When all the

components are assembled it is needed to be programmed accordingly to make drone fly and so does require knowledge of Programming.

Future

Now it is the Perfect time for young people and enthusiast to get involved in learning this new technology. The drone industry will grow more from 11 billion to 140 billion over the next 10 years. Various Universities have already started incorporating Drones as a part of their Course Program.

WHAT is a DRONE?

A drone, in a technological context, is an unmanned aircraft. Essentially, a drone is a flying robot. The aircrafts may be remotely controlled or can fly autonomously through software-controlled flight plans in their embedded systems working in conjunction with on-board sensors and GPS. Drones can be controlled by remote control system or a ground cockpit. Drones come in a wide variety of sizes, with the large drone mostly used for military purposes such as the Predator drone, other smaller drones which can be launched by hand, to other unmanned aircraft which require short runways.

COURSE CONTENTS

Session 1 –

- Mechanics of flying vehicles
- Aeroplanes: Why is Aeroplane stable?

An aerodynamic system requires some special feature to be added to the electronic gadget to attaining flight. These features revolve around weight, external forces and shape of the body.

Session 2 –

- How does propeller work?
- Stable systems vs unstable systems
- Activity – Understanding the Rotation counter-balance phenomenon

Session 3 -
- Motor: Brushed / Brushless
- Propellers: How does a fan / propeller works
- Activity – Basic principle of motor using wire and battery

Session 4 –
- Multirotors: Types and Functions of sensors and computers
- Helicopter - How helicopter maneuver

Session 5 –
- Sensors for stability
- Battery: Types of batteries, Why LiPo / Parameters of LiPo

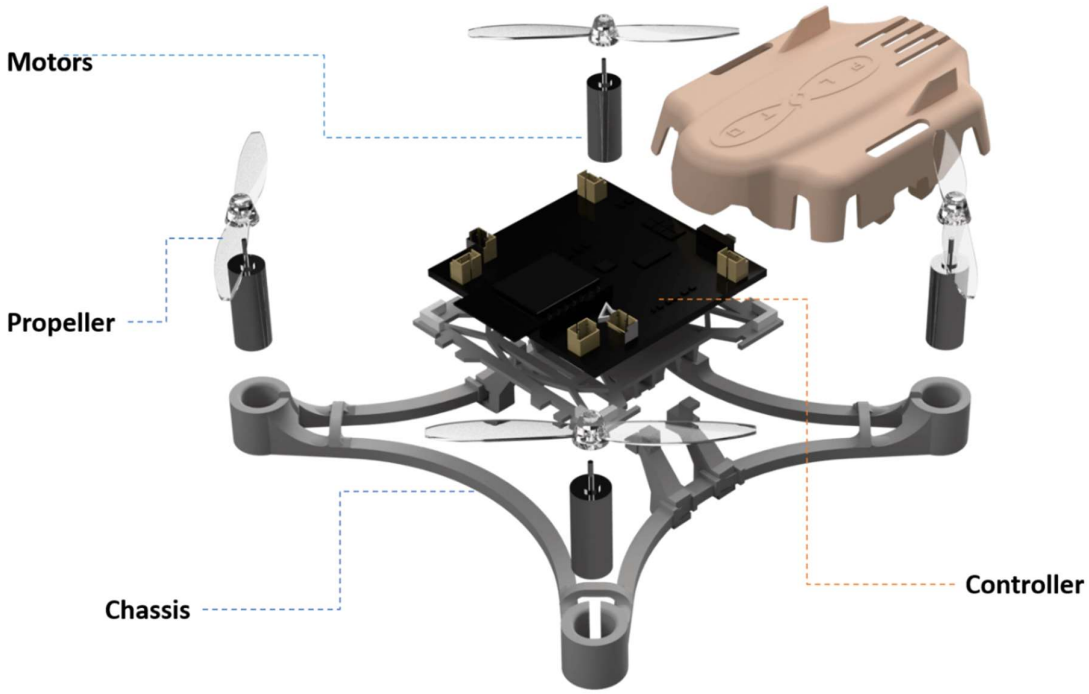
Session 6 –
- Building a “nano drone Pluto”
- Flying Pluto with Smartphone
- Concept of Coding
- Coding Languages with Basics

Session 7 –
- Concept of Embedded C
- Activity – Take off and Landing (Testing Stability of Drones)
- Activity – Catch me if you can (Drone Fun Game)

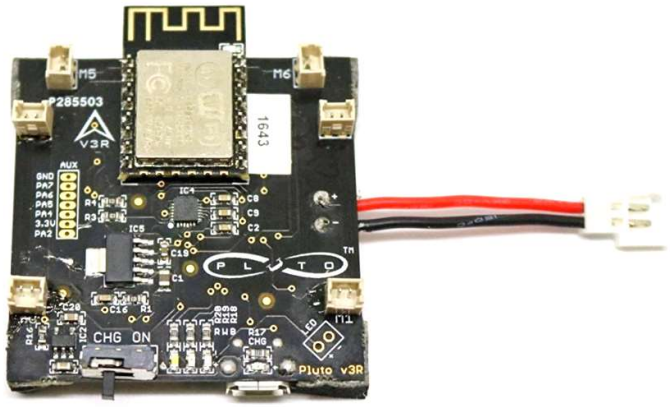
Session 8 –
- Activity – Algorithm development for problem statements (Basics of Programming)
- Activity – Auto take off (Coding the Drone)
- Activity – Chuck to arm : Special Feature

Session 9 –
- Closing Session with QnA

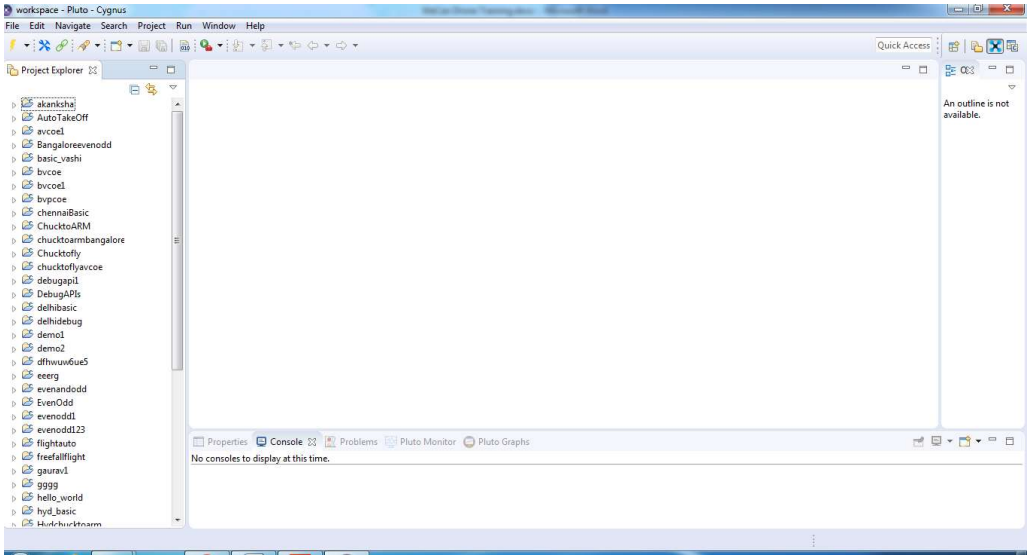
DRONE ASSEMBLY:



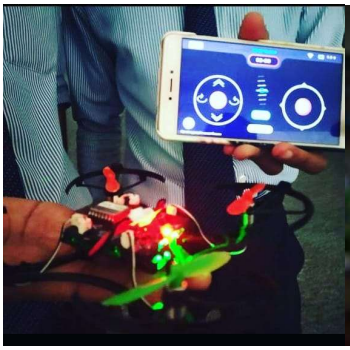
CONTROLLER:



IDE – CYGNUS



HANDS-ON SESSION:

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ABOUT US

WEORG is founded by Engineers from Mumbai, working in the education industry with a passion for training. We are dedicated towards providing participants with state of the art training in technology. We do this by introducing participants to projects and research topics that will help the engineering community identify and effectively solve problems for humankind at large. This will make the participants technically sound and prepare them for challenges they may face in the industry. We assist participants who are self-motivated, to achieve bigger and better benchmarks by attaining industry grade skill-set on several platforms.

Dalvik Apps is a company that believes in building things that are meaningful we are into Education, Workshops, Information Technology, Application Development, Software Development &Web Development. On Request we are Providing workshops on various creative modules like Android,iPhone, Google Glass, Augmented Reality and Many more.

MISSION

To bring technical education in to a level wherein India shall produce the most technology oriented engineers in the world and make a remarkable difference.

VISION

To provide hands-on education to as many students as possible thereby promoting and developing technology and innovation on a large scale.

GOAL

To become the country's finest base for technical education and center of innovation by making hands-on education available to students across the country.