

Rank2top's Kit-Based Training Course

(LEVEL-WISE COURSE)

Level Up Your Potential

Introduction to Company: Rank2top Private Limited, a leading EdTech company, is thrilled to announce the launch of its highly anticipated kit-based training course in IT. This innovative program offers students the opportunity to delve into various fields of technology through hands-on learning experiences.

With electronics starter kits, IoT kits, robotics kits, automobile kits, and sensors application kits, Rank2top's comprehensive course empowers students to unlock their potential and excel in the exciting world of IT.

- **Explore a Multitude of Technological Fields:** Rank2top's kit-based training course is designed to cater to the diverse interests of aspiring technologists. With a wide range of kits available, students can explore the following fields:
- **Electronics Starter Kits:** These kits introduce students to electronics, circuit design, and component integration fundamentals. Students gain a solid foundation in electronic principles, enabling them to understand the inner workings of various devices.
- **IoT Kits:** The Internet of Things (IoT) is a rapidly growing field that combines hardware and software to create smart, interconnected systems. Rank2top's IoT kits provide hands-on experience in building IoT projects, including sensor integration, data collection, and cloud connectivity.
- **Robotics Kits:** Robotics is an exciting field that merges engineering, programming, and artificial intelligence. Students learn to assemble, program, and control robotic systems through robotics kits, exploring concepts such as motion planning, computer vision, and machine learning.
- **Automobile Kits:** With the increasing integration of technology in the automotive industry, automobile kits offer students the opportunity to delve into concepts like vehicle electronics, automotive sensors, and telematics. Students gain practical knowledge applicable to the future of transportation.
- **Sensors Application Kits:** Sensors play a crucial role in various technological applications. Rank2top's sensors application kits enable students to understand sensor technologies, their applications, and how they interact with other components in real-world scenarios.
- **Hands-on Learning Experience:** Rank2top's kit-based training course emphasizes hands-on learning to provide a practical understanding of IT concepts. Students receive carefully curated kits that include all the necessary components, tools, and instructions to

complete engaging projects. This hands-on approach fosters critical thinking, problem-solving skills, and creativity, preparing students for real-world challenges.

- **Expert Guidance and Mentorship:** To maximize students' learning experience, Rank2top provides expert guidance and mentorship throughout the course. Experienced tutors with industry knowledge and technical expertise are available to support and assist students at every step. Their insights and guidance ensure that students gain a comprehensive understanding of the subject matter and overcome any challenges they encounter.
- **Unlocking Future Opportunities:** By enrolling in Rank2top's kit-based training course, students open doors to a plethora of future opportunities. The IT industry is rapidly expanding, and professionals with practical skills and hands-on experience are in high demand. The knowledge gained through this course equips students to pursue careers in electronics, IoT, robotics, automobile engineering, and sensor technologies.
- **Personalized Learning Journey:** Rank2top believes in catering to the unique needs of each student. The kit-based training course allows students to progress at their own pace, ensuring a personalized learning journey. Students can explore their interests, focus on specific areas of technology, and customize their learning experience based on their strengths and aspirations.

Rank2top's kit-based training course in IT presents an exciting opportunity for students to dive into various technological fields and gain hands-on experience. With electronics starter kits, IoT kits, robotics kits, automobile kits, and sensors application kits, students can explore their interests, expand their knowledge, and unlock future opportunities in the IT industry. Join Rank2top's transformative program and embark on a journey of discovery, innovation, and growth in the dynamic world of technology.

SALIENT FEATURES OF THE COURSE:

- ✚ The Course is designed in the form of levels such as weekly distribution of complete course module subject to our training kits.
- ✚ Each week has one level and one should have to do a separate registration for each level.
- ✚ For each Course, you should move to the next level only when the lower-level exam is cleared.
- ✚ Registration for Each Level is free but the **course fee is 2000/- for each level per week.**
- ✚ Digital Certificate is provided after the completion of each level and a **Complete course compilation certificate (Hard Copy)** is given after the completion of all **levels with a charge of 500/- Rs.**
- ✚ Candidates are free to join any level of any course but if he seeking to get enrolment in a higher level of any course then he should clear the lower-level exam first.
- ✚ Meriteous Students will get a scholarship for the next Level.

ELECTRONICS STARTER KIT

Week-1	Week-2	Week-3	Week-4	Week-5	Week-6
Level 1: Introduction to Electronics Basic concepts of electricity and circuits Identifying and understanding electronic components Introduction to breadboard connections	Level 2: Circuit Building and Analysis Building simple circuits on the breadboard Analysing circuit behaviour using Ohm's law Introducing resistors, capacitors, and LEDs	Level 3: Sensor Integration Understanding sensors and their applications Integrating sensors with circuits Exploring temperature, light, and motion sensors	Level 4: Digital Electronics Introduction to digital logic gates (AND, OR, NOT) Building simple digital circuits Exploring binary and hexadecimal number systems	Level 5: Arduino Programming Introduction to Arduino and its functionalities Writing and uploading simple programs using Arduino IDE Controlling LEDs and sensors with Arduino	Level 6: Project Building Applying acquired knowledge to build a mini-project Designing and implementing a circuit with multiple components Troubleshooting and debugging techniques

IOT DEVELOPMENT KIT

Week-1	Week-2	Week-3	Week-4	Week-5	Week-6
Level 1: Introduction to IoT Understanding the concept of the Internet of Things Exploring IoT applications in various industries Introduction to IoT platforms and protocols.	Level 2: IoT Device Configuration Configuring IoT devices such as Raspberry Pi or ESP8266 Setting up Wi-Fi connectivity and connecting sensors Sending sensor data to cloud platforms	Level 3: Data Acquisition and Visualization Collecting sensor data and storing it in databases Visualizing data using platforms like Node-RED Creating interactive dashboards and real-time data monitoring	Level 4: Cloud Integration and Automation Integrating IoT devices with cloud services like AWS or Azure Implementing automation and control systems using cloud platforms Exploring concepts like MQTT, webhooks, and APIs	Level 5: Security and Privacy in IoT Understanding IoT security threats and vulnerabilities Implementing security measures to protect IoT devices and data Exploring encryption techniques and secure communication protocols	Level 6: IoT Project Development Applying knowledge to develop a complete IoT project Designing a system that solves a real-world problem Presenting and demonstrating the project's functionality

ROBOTICS KIT

Week-1	Week-2	Week-3	Week-4	Week-5	Week-6
Level 1: Introduction to Robotics Understanding the basics of robotics Exploring different types of robots Introduction to robot components and mechanics	Level 2: Robot Control and Programming Introduction to robot control systems Programming robots using graphical interfaces Exploring robot movements and navigation	Level 3: Sensors and Perception Understanding different types of sensors used in robotics Integrating sensors with robots for perception Exploring sensors for distance, colour, and object detection	Level 4: Robot Manipulation and Gripping Introduction to robot arms and grippers Learning robot arm control and trajectory planning Implementing gripping and manipulation tasks	Level 5: Autonomous Navigation Introduction to robot localization and mapping Implementing obstacle detection and avoidance Exploring algorithms for autonomous robot navigation	Level 6: Robot Project Development Applying knowledge to develop a complete robot project Designing and building a functional robot Programming the robot to perform specific tasks

AUTOMOBILE KIT

Week-1	Week-2	Week-3	Week-4	Week-5	
Level 1: Introduction to Automobile Systems Understanding the basics of automobile technology Exploring different automobile subsystems Introduction to automotive electrical systems	Level 2: Automotive Electronics and Diagnostics Exploring electronic control units (ECUs) in vehicles Understanding diagnostic systems and error codes Troubleshooting and diagnosing common vehicle issues	Level 3: Vehicle Communication and Networking Introduction to in-vehicle communication protocols (CAN, LIN) Understanding vehicle networking architectures Exploring diagnostics and communication tools	Level 4: Advanced Automotive Systems Exploring advanced systems like advanced driver-assistance systems (ADAS) Introduction to Hybrid and electric vehicle technology Understanding autonomous vehicle concepts	Level 5: Automotive Project Development Applying knowledge to develop a complete automotive project Designing and implementing modifications or enhancements Presenting and demonstrating the project's functionality	

SENSORS APPLICATION KIT

Week-1	Week-2	Week-3	Week-4		
Level 1: Introduction to Sensors Understanding different types of sensors and their applications Exploring sensor principles and working mechanisms Introduction to sensor data acquisition and processing	Level 2: Sensor Integration and Interfacing Integrating sensors with microcontrollers or development boards Interfacing sensors with analogue and digital inputs Collecting and analysing sensor data	Level 3: Sensor Data Processing and Analysis Processing and filtering sensor data Implementing algorithms for data analysis Visualizing sensor data using graphs and charts	Level 4: Sensor Applications and Projects Applying sensors in specific applications (e.g., environmental monitoring, health monitoring) Designing and implementing sensor-based projects Presenting and demonstrating the project's functionality		

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