**LESSON PLAN – 2023 - 2024**

| **DISCIPLINE:CSE** | **SEMESTER:6TH** | **NAME OF THE TEACHING FACULTY: : SMT REETANJALI PANDA** |
|---|---|---|
| **SUBJECT:CNS** | **NO.OF DAYS/PER WEEK CLASS ALLOTTED:4** | **SEMESTER FROM DATE: 16/01/2024 TO DATE: 1/05/2025 NO.OF WEEKS:15** |
| WEEK | CLASS DAY | THEORY/PRACTICAL TOPICS |
| 1ST | 1ST | **Possible attacks on computers** |
| | 2ND | The need for security |
| | 3RD | Security approach |
| | 4TH | Principles of security |
| 2ND | 1ST | Types of attacks |
| | 2ND | **Cryptography concepts** |
| | 3RD | **Cryptography concepts** |
| | 4TH | Plain text |
| 3RD | 1ST | Cipher Text |
| | 2ND | Substitution techniques |
| | 3RD | Transposition techniques |
| | 4TH | Encryption techniques |
| 4TH | 1ST | Decryption techniques |
| | 2ND | Symmetric key cryptography |
| | 3RD | Asymmetric key cryptography |
| | 4TH | **Symmetric key algorithms** |
| 5TH | 1ST | Symmetric key algorithm types |
| | 2ND | Symmetric key algorithm types |
| | 3RD | **Asymmetric key algorithms** |
| | 4TH | Asymmetric key algorithm types |
| 6TH | 1ST | Overview of Symmetric key cryptography |
| | 2ND | Overview of Symmetric key cryptography |
| | 3RD | Data encryption standards |
| | 4TH | Data encryption standards |
| 7TH | 1ST | Over view of Asymmetric key cryptography |
| | 2ND | The RSA algorithm |
| | 3RD | The RSA algorithm |
| | 4TH | Symmetric key cryptography |
| 8TH | 1ST | Asymmetric key cryptography |
| | 2ND | Digital signature |
| | 3RD | **Digital certificate** |
| | 4TH | Digital certificates |
| 9TH | 1ST | **Public key infrastructure** |
| | 2ND | Private key management |
| | 3RD | Private key management |
| | 4TH | PKIX Model |
| 10TH | 1ST | PKIX Model |
| | 2ND | Public key cryptography standards |
| | 3RD | Public key cryptography standards |
| | 4TH | Public key cryptography standards |

**LESSON PLAN – 2023 - 2024**

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|---|---|---|
| 11TH | 1ST | **Internet security protocols** |
| | 2ND | Basic concept |
| | 3RD | Secure socket layer |
| | 4TH | Transport layer security |
| 12TH | 1ST | Transport layer security |
| | 2ND | Secure Hyper text transfer protocol(SHTTP) |
| | 3RD | Secure Hyper text transfer protocol(SHTTP) |
| | 4TH | Time stamping protocol (TSP) |
| 13TH | 1ST | Secure electronic transaction (SET) |
| | 2ND | **User authentication** |
| | 3RD | Authentication basics |
| | 4TH | Password |
| 14TH | 1ST | Authentication Tokens |
| | 2ND | Certificate based authentication |
| | 3RD | Biometric authentication |
| | 4TH | **Network Security & VPN** |
| 15TH | 1ST | Brief introduction of TCP/IP |
| | 2ND | Firewall |
| | 3RD | IP Security |
| | 4TH | Virtual Private Network (VPN) |
| **DISCIPLINE:CSE** | **SEMESTER: 6th** | **NAME OF THE TEACHING FACULTY: SMT NAYANA PATEL** |
| **SUBJECT: IOT** | **NO.OF DAYS/PER WEEK CLASS ALLOTTED:4** | **SEMESTER FROM DATE: 16/01/2024 TO DATE: 1/05/2025 NO.OF WEEKS:15** |
| **WEEK** | **CLASS DAY** | **THEORY TOPICS** |
| 1ST | 1ST | Introduction to Internet of Things. Introduction.Characteristics of IoT . Applications of Io |
| | 2ND | IoT Categories IoT Enablers and connectivity layers |
| | 3RD | Baseline Technologies Sensor |
| | 4TH | Actuator |
| 2ND | 1ST | IoT components and implementation |
| | 2ND | Challenges for IoT |
| | 3RD | IOT Networking . Terminologies. |
| | 4TH | Gateway Prefix allotment |
| 3RD | 1ST | Impact of mobility on Addressing |
| | 2ND | Multihoming |
| | 3RD | Deviation from regular Web 2.6 |
| | 4TH | IoT identification and Data protocols |
| 4TH | 1ST | Connectivity Technologies . Introduction. |
| | 2ND | IEEE 802.15.4 |
| | 3RD | IEEE 802.15.4 |
| | 4TH | ZigBee, 6LoWPAN |
| 5TH | 1ST | RFID, HART and wireless HART |

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|---|---|---|
| | 2ND | NFC, Bluetooth, Z wave, ISA100.11.A |
| | 3RD | Introduction. Components of a sensor node .Modes of Detection |
| | 4TH | Challenges in WSN .Sensor Web .Cooperation and Behaviour of Nodes in WSN |
| 6TH | 1ST | Self Management of WSN .Social sensing WSN |
| | 2ND | Application of WSN .Wireless Multimedia sensor network |
| | 3RD | Wireless Nanosensor Networks. Underwater acoustic sensor networks. |
| | 4TH | WSN Coverage .Stationary WSN, Mobile WSN. |
| 7TH | 1ST | M2M communication |
| | 2ND | M2M communication |
| | 3RD | M2M Ecosystem |
| | 4TH | M2M Ecosystem |
| 8TH | 1ST | M2M service Platform |
| | 2ND | Interoperability |
| | 3RD | Programming with Arduino .Features of Arduino |
| | 4TH | Components of Arduino Board. |
| 9TH | 1ST | Arduino IDE |
| | 2ND | Case Studies |
| | 3RD | Case Studies |
| | 4TH | Programming with Raspberry Pi |
| 10TH | 1ST | Architecture and Pin Configuration |
| | 2ND | Case studies |
| | 3RD | Implementation of IoT with Raspberry Pi |
| | 4TH | Implementation of IoT with Raspberry Pi |
| 11TH | 1ST | Software defined Networking .Limitation of current network |
| | 2ND | Origin of SDN . SDN Architecture |
| | 3RD | Rule Placement, Open flow Protocol |
| | 4TH | Controller placement |
| 12TH | 1ST | Security in SDN |
| | 2ND | Integrating SDN in IoT |
| | 3RD | Smart Homes. Origin and example of Smart Home Technologies |
| | 4TH | Smart Home Implementation |
| 13TH | 1ST | Home Area Networks(HAN) |
| | 2ND | Home Area Networks(HAN) |
| | 3RD | Smart Home benefits and issues |
| | 4TH | Smart Cities.Characteristics of Smart Cities . Smart city Frameworks |
| 14TH | 1ST | Challenges in Smart cities |
| | 2ND | Data Fusion |
| | 3RD | Smart Parking |
| | 4TH | Energy Management in Smart cities |

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|---|---|---|
| 15TH | 1ST | Industrial IoT. IIoT requirements |
| | 2ND | Design considerations |
| | 3RD | Applications of IIoT .Benefits of IIoT . |
| | 4TH | Challenges of IIoT |
| **DISCIPLINE:CSE** | **SEMESTER:6th** | **NAME OF THE TEACHING FACULTY: SMT SUMITRA MAHAPATRA** |
| **SUBJECT:CC** | **NO.OF DAYS/PER WEEK**<br>**CLASS ALLOTTED:4** | **SEMESTER FROM DATE: 16/01/2024 TO DATE: 1/05/2025**<br>**NO.OF WEEKS:15** |
| **WEEK** | **CLASS DAY** | **THEORY/PRACTICAL TOPICS** |
| 1st | 1st | 1.1. Historical development<br>1.2. Vision of Cloud Computing |
| | 2nd | 1.3. Characteristics of Cloud computing<br>1.4. Cloud computing Reference model |
| | 3rd | 1.5. Cloud computing environment<br>1.6. Cloud Service requirements |
| | 4th | 1.7. Cloud and Dynamic Infrastructure<br>1.8. Cloud Adoption |
| 2nd | 1st | 1.9. Cloud applications |
| | 2nd | 2.1. Introduction<br>2.2. Cloud Reference Model |
| | 3rd | 2.1. Introduction<br>2.2. Cloud Reference Model |
| | 4th | 2.3. Types of Clouds |
| 3rd | 1st | 2.3. Types of Clouds |
| | 2nd | 2.4. Cloud Interoperability and standards |
| | 3rd | 2.4. Cloud Interoperability and standards |
| | 4th | 2.5. Cloud computing Interoperability use cases |
| 4th | 1st | 2.6. Role of standards in Cloud Computingenvironment |
| | 2nd | 3.1. Introduction<br>3.2. Scalability and Fault Tolerance |
| | 3rd | 3.1. Introduction<br>3.2. Scalability and Fault Tolerance |

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| | 4th | 3.3. Cloud solutions<br>3.4. Cloud Ecosystem |
| 5th | 1st | 3.5. Cloud Business process management<br>3.6. Portability and Interoperability |
| | 2nd | 3.7. Cloud Service management<br>3.8. Cloud Offerings |
| | 3rd | 3.9. Testing under Control<br>3.10. Cloud service Controls |
| | 4th | 3.11. Virtual desktop Infrastructure |
| 6h | 1st | 3.11. Virtual desktop Infrastructure |
| | 2nd | 4.1. Create a virtualised Architecture<br>4.2. Data Centre |
| | 3rd | 4.3. Resilience<br>4.4. Agility |
| | 4th | 4.5. Cisco Data Centre Network architecture |
| 7th | 1st | 4.6. Storage<br>4.7. Provisioning |
| | 2nd | 4.8. Asset Management<br>4.9. Concept of Map Reduce |
| | 3rd | 4.9. Concept of Map Reduce |
| | 4th | 4.10. Cloud Goverance<br>4.11. Load Balancing |
| 8th | 1st | 4.12. High Availability<br>4.13. Disaster Recovery |
| | 2nd | 5.1. Virtualisation<br>5.2. Betwork Virtualisation |
| | 3rd | 5.3. Desktop and Application Virtualisation |
| | 4th | 5.4. Desktop as a service |
| 9th | 1st | 5.5. Local desktop Virtualisation<br>5.6. Virtualisation benefits |
| | 2nd | 5.7. Server Virtualisation |

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| | 3rd | 5.8. Block and File level Storage Virtualisation |
| | 4th | 5.9. Virtual Machine Monitor<br>5.10. Infrastructure Requirements |
| 10th | 1st | 5.11. VLAN and VSAN |
| | 2nd | 6.1. Cloud Security Fundamentals |
| | 3rd | 6.2. Cloud security services |
| | 4th | 6.2. Cloud security services |
| 11th | 1st | 6.3. Design Principles |
| | 2nd | 6.3. Design Principles |
| | 3rd | 6.4. Secure Cloud software requirements |
| | 4th | 6.5. Policy Implementation |
| 12th | 1st | 6.6. Cloud Computing Security Challenges |
| | 2nd | 7.1. Architectural Considerations<br>7.2. Information Classification |
| | 3rd | 7.3. Virtual Private Networks<br>7.4. Public Key and Encryption Key management |
| | 4th | 7.5. Digital certificates<br>7.6. Key management<br>7.7. Memory Cards |
| 13th | 1st | 7.6. Key management<br>7.7. Memory Cards |
| | 2nd | 7.8. Implementing Identity Management<br>7.9. Controls and Autonomic System |
| | 3rd | 8.1. Cloud Information security vendors |
| | 4th | 8.2. Cloud Federation, charactrization |
| 14th | 1st | 8.3. Cloud Federation stack |
| | 2nd | 8.4. Third Party Cloud service |
| | 3rd | 8.5. Case study |
| | 4th | 9.1. Introduction |
| 15th | 1st | 9.2. Data Source |

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| | 2nd | 9.2. Data Source |
| | 3rd | 9.3. Data storage and Analysis |
| | 4th | 9.4. Comparison with other system |
| **DISCIPLINE:CSE** | **SEMESTER: 6th** | **NAME OF THE TEACHING FACULTY: Sujata kumari Acharya** |
| **SUBJECT:E-Commerce** | **NO.OF DAYS/PER WEEK CLASS ALLOTTED:4** | **SEMESTER FROM DATE: 16/01/2024 TO DATE: 1/05/2025 NO.OF WEEKS:15** |
| WEEK | CLASS DAY | THEORY/PRACTICAL TOPICS |
| 1ST | 1ST | Introduction,What is E-commerce |
| | 2ND | Introduction,What is E-commerce |
| | 3RD | E-Business |
| | 4TH | Categories of E-Commerce Applications |
| 2ND | 1ST | Global Trading Environment & Adoption of E-commerce |
| | 2ND | Comparison between traditional and E-commerce |
| | 3RD | Comparison between traditional and E-commerce |
| | 4TH | Advantage and Disadvantage |
| 3RD | 1ST | Introduction of **Business Models of E-Commerce** |
| | 2ND | Business Models of E-Commerce |
| | 3RD | B2C |
| | 4TH | B2B |
| 4TH | 1ST | Difference between B2C and B2B |
| | 2ND | C2C |
| | 3RD | Introduction of Need for B2B |
| | 4TH | Need for B2B |
| 5TH | 1ST | EDI |
| | 2ND | Paperless Transaction |
| | 3RD | EDI standards |
| | 4TH | Data Standards used in EDI |
| 6TH | 1ST | Cost of EDI , Reasons for Slow acceptability |
| | 2ND | Electronic Fund Transfer (Canada case eliminated) |
| | 3RD | XML and its application , Comparison of HTML and XML |
| | 4TH | Advantage of XML as a Technology |
| 7TH | 1ST | Introduction of **Business Applications of E-Commerce,** Trade Cycle |
| | 2ND | Supply Chain |
| | 3RD | E-Procurement |

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| | 4TH | Implementing E-Procurement |
| 8TH | 1ST | Competitive Advantage |
| | 2ND | E-Commerce Application in Manufacturing |
| | 3RD | E-Commerce Application in Wholesale |
| | 4TH | E-Commerce Application in Retail, E-Commerce Application in Service Sector |
| 9TH | 1ST | Introduction of **E-Commerce in Technology,** IT infrastructure**,** Contents |
| | 2ND | Internet, Intranet |
| | 3RD | Middleware |
| | 4TH | Extranet, VPN |
| 10TH | 1ST | Firewall, Cryptography |
| | 2ND | Digital Signature |
| | 3RD | Digital Envelope , Digital certificates |
| | 4TH | Introduction of **Electronic Payment System ,** Electronic Payment Mechanism |
| 11TH | 1ST | Types of Payment System |
| | 2ND | Risks Associated with Electronic Payment |
| | 3RD | Risk Management option , Payment Gateway |
| | 4TH | Issues of Electronic Payment Technology |
| 12TH | 1ST | Recommendations |
| | 2ND | Security Requirement |
| | 3RD | Secure Socket Layer , Biometrics |
| | 4TH | Internet Banking |
| 13TH | 1ST | Introduction of **Security Issues in E-Commerce** |
| | 2ND | E-commerce security issues |
| | 3RD | Risks involved in e-commerce |
| | 4TH | Protecting e-commerce system |
| 14TH | 1ST | Common E-commerce Security Tools |
| | 2ND | Client server Network security |
| | 3RD | Data and Message Security |
| | 4TH | **Current Trends in Electronic World** |
| 15TH | 1ST | E-waste |
| | 2ND | E-Surveillance |
| | 3RD | E-governance |
| | 4TH | E-care |
| **DISCIPLINE:CSE** | **SEMESTER: 6th** | **NAME OF THE TEACHING FACULTY: SMT REETANJALI PANDA & Sujata kumari Acharya** |
| **SUBJECT:NS LAB** | **NO.OF DAYS/PER WEEK**<br>**CLASS ALLOTTED:4** | **SEMESTER FROM DATE: 16/01/2024 TO DATE: 1/05/2025**<br>**NO.OF WEEKS:15** |

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| WEEK | CLASS DAY | THEORY/PRACTICAL TOPICS |
|---|---|---|
| 1st | 1st | 1. Installation and comparison of various anti virus software |
| | 2nd | 1. Installation and comparison of various anti virus software |
| | 3rd | 1. Installation and comparison of various antivirus software |
| | 4th | 1. Installation and comparison of various anti virus software |
| 2nd | 1st | 1. Installation and comparison of various anti virus software |
| | 2nd | 1. Installation and comparison of various anti virus software |
| | 3rd | 1. Installation and comparison of various anti virus software |
| | 4th | 1. Installation and comparison of various anti virus software |
| 3rd | 1st | 2. Installation and study of various parametersof firewall. |
| | 2nd | 2. Installation and study of various parametersof firewall. |
| | 3rd | 2. Installation and study of various parametersof firewall. |
| | 4th | 2. Installation and study of various parametersof firewall. |
| 4th | 1st | 2. Installation and study of various parametersof firewall. |
| | 2nd | 2. Installation and study of various parametersof firewall. |
| | 3rd | 2. Installation and study of various parametersof firewall. |
| | 4th | 2. Installation and study of various parametersof firewall. |
| 5th | 1st | 3. Writing program in C to Encrypt/Decrypt using XOR key. |
| | 2nd | 3. Writing program in C to Encrypt/Decrypt using XOR key. |
| | 3rd | 3. Writing program in C to Encrypt/Decrypt using XOR key. |
| | 4th | 3. Writing program in C to Encrypt/Decrypt using XOR key. |

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| 6h | 1st | 3. Writing program in C to Encrypt/Decrypt using XOR key. |
| | 2nd | 3. Writing program in C to Encrypt/Decrypt using XOR key. |
| | 3rd | 3. Writing program in C to Encrypt/Decrypt using XOR key. |
| | 4th | 3. Writing program in C to Encrypt/Decrypt using XOR key. |
| 7th | 1st | 3. Writing program in C to Encrypt/Decrypt using XOR key. |
| | 2nd | 3. Writing program in C to Encrypt/Decrypt using XOR key. |
| | 3rd | 3. Writing program in C to Encrypt/Decrypt using XOR key. |
| | 4th | 3. Writing program in C to Encrypt/Decrypt using XOR key. |
| 8th | 1st | 4. Study of VPN. |
| | 2nd | 4. Study of VPN. |
| | 3rd | 4. Study of VPN. |
| | 4th | 4. Study of VPN. |
| 9th | 1st | 4. Study of VPN. |
| | 2nd | 4. Study of VPN. |
| | 3rd | 4. Study of VPN. |
| | 4th | 4. Study of VPN. |
| 10th | 1st | 4. Study of VPN. |
| | 2nd | 5. Study of various hacking tools. |
| | 3rd | 5. Study of various hacking tools. |
| | 4th | 5. Study of various hacking tools. |
| 11th | 1st | 5. Study of various hacking tools. |
| | 2nd | 5. Study of various hacking tools. |
| | 3rd | 5. Study of various hacking tools. |
| | 4th | 5. Study of various hacking tools. |

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| 12th | 1st | 5. Study of various hacking tools. |
| | 2nd | 5. Study of various hacking tools. |
| | 3rd | 5. Study of various hacking tools. |
| | 4th | 5. Study of various hacking tools. |
| 13th | 1st | 5. Study of various hacking tools. |
| | 2nd | 5. Study of various hacking tools. |
| | 3rd | 6. Practical applications of digital signature |
| | 4th | 6. Practical applications of digital signature |
| 14th | 1st | 6. Practical applications of digital signature |
| | 2nd | 6. Practical applications of digital signature |
| | 3rd | 6. Practical applications of digital signature |
| | 4th | 6. Practical applications of digital signature |
| 15th | 1st | 6. Practical applications of digital signature |
| | 2nd | 6. Practical applications of digital signature |
| | 3rd | 6. Practical applications of digital signature |
| | 4th | 6. Practical applications of digital signature |
| **DISCIPLINE:CSE** | **SEMESTER:6TH** | **NAME OF THE TEACHING FACULTY: SMT SUMITRA MAHAPATRA & NAYANA PATEL** |
| **SUBJECT:IOT LAB** | **NO.OF DAYS/PER WEEK**<br>**CLASS ALLOTTED:4** | **SEMESTER FROM DATE: 16/01/2024 TO DATE: 1/05/2025**<br>**NO.OF WEEKS:15** |
| **WEEK** | **CLASS DAY** | **THEORY/PRACTICAL TOPICS** |
| 1st | 1st | Basics of C language using Arduino IDE<br>Understating basics of Arduino IDE |
| | 2nd | Basics of C language using Arduino IDE<br>Understating basics of Arduino IDE |
| | 3rd | • Variables, datatype, loops, control statement, function |

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| | 4th | • Variables, datatype, loops, control statement, function |
| 2nd | 1st | • Variables, datatype, loops, control statement, function |
| | 2nd | • Variables, datatype, loops, control statement, function |
| | 3rd | • Variables, datatype, loops, control statement, function |
| | 4th | • Variables, datatype, loops, control statement, function |
| 3rd | 1st | • Variables, datatype, loops, control statement, function |
| | 2nd | • Variables, datatype, loops, control statement, function |
| | 3rd | Practical using Arduino-interfacing sensors Interfacing Light Emitting Diode(LED)-Blinking LED |
| | 4th | Practical using Arduino-interfacing sensors Interfacing Light Emitting Diode(LED)-Blinking LED |
| 4th | 1st | Practical using Arduino-interfacing sensors Interfacing Light Emitting Diode(LED)-Blinking LED |
| | 2nd | Practical using Arduino-interfacing sensors Interfacing Light Emitting Diode(LED)-Blinking LED |
| | 3rd | Practical using Arduino-interfacing sensors Interfacing Light Emitting Diode(LED)-Blinking LED |
| | 4th | Practical using Arduino-interfacing sensors Interfacing Light Emitting Diode(LED)-Blinking LED |
| 5th | 1st | • Interfacing Button and LED – LED blinking when button is pressed |
| | 2nd | • Interfacing Button and LED – LED blinking when button is pressed |
| | 3rd | • Interfacing Button and LED – LED blinking when button is pressed |
| | 4th | • Interfacing Button and LED – LED blinking when button is pressed |
| 6h | 1st | • Interfacing Button and LED – LED blinking when button is pressed |

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| | 2nd | • Interfacing Button and LED – LED blinking when button is pressed |
| | 3rd | • Interfacing Light Dependent Resistor (LDR) and LED, displaying automatic |
| | 4th | • Interfacing Light Dependent Resistor (LDR) and LED, displaying automatic |
| 7th | 1st | • Interfacing Light Dependent Resistor (LDR) and LED, displaying automatic |
| | 2nd | • Interfacing Light Dependent Resistor (LDR) and LED, displaying automatic |
| | 3rd | • Interfacing Light Dependent Resistor (LDR) and LED, displaying automatic |
| | 4th | • Interfacing Light Dependent Resistor (LDR) and LED, displaying automatic |
| 8th | 1st | • Night lamp Interfacing Temperature Sensor(LM35) and/or humidity sensor (e.g.DHT11 |
| | 2nd | • Night lamp Interfacing Temperature Sensor(LM35) and/or humidity sensor (e.g.DHT11 |
| | 3rd | • Night lamp Interfacing Temperature Sensor(LM35) and/or humidity sensor (e.g.DHT11 |
| | 4th | • Night lamp Interfacing Temperature Sensor(LM35) and/or humidity sensor (e.g.DHT11 |
| 9th | 1st | • Night lamp Interfacing Temperature Sensor(LM35) and/or humidity sensor (e.g.DHT11 |
| | 2nd | • Night lamp Interfacing Temperature Sensor(LM35) and/or humidity sensor (e.g.DHT11 |
| | 3rd | • Interfacing Liquid Crystal Display(LCD) – display data generated by sensor |
| | 4th | • Interfacing Liquid Crystal Display(LCD) – display data generated by sensor |

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| 10th | 1st | • Interfacing Liquid Crystal Display(LCD) – display data generated by sensor |
| | 2nd | • Interfacing Liquid Crystal Display(LCD) – display data generated by sensor |
| | 3rd | • Interfacing Liquid Crystal Display(LCD) – display data generated by sensor |
| | 4th | • Interfacing Liquid Crystal Display(LCD) – display data generated by sensor |
| 11th | 1st | • On LCD Interfacing Air Quality Sensor-pollution (e.g. MQ135) – display data on LCD |
| | 2nd | • On LCD Interfacing Air Quality Sensor-pollution (e.g. MQ135) – display data on LCD |
| | 3rd | • On LCD Interfacing Air Quality Sensor-pollution (e.g. MQ135) – display data on LCD |
| | 4th | • On LCD Interfacing Air Quality Sensor-pollution (e.g. MQ135) – display data on LCD |
| 12th | 1st | • On LCD Interfacing Air Quality Sensor-pollution (e.g. MQ135) – display data on LCD |
| | 2nd | • On LCD Interfacing Air Quality Sensor-pollution (e.g. MQ135) – display data on LCD |
| | 3rd | ,• Switch on LED when data sensed is higherthan specified value. Interfacing Bluetooth module (e.g. HC05)- receiving data from mobile phone |
| | 4th | ,• Switch on LED when data sensed is higherthan specified value. Interfacing Bluetooth module (e.g. HC05)- receiving data from mobile phone |
| 13th | 1st | ,• Switch on LED when data sensed is higherthan specified value. Interfacing Bluetooth module (e.g. HC05)- receiving data from mobile phone |
| | 2nd | ,• Switch on LED when data sensed is higherthan specified value. Interfacing Bluetooth module (e.g. HC05)- receiving data from mobile phone |
| | 3rd | ,• Switch on LED when data sensed is higherthan specified value. Interfacing Bluetooth module (e.g. HC05)- receiving data from mobile phone |

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| | 4th | ,• Switch on LED when data sensed is higherthan specified value. Interfacing Bluetooth module (e.g. HC05)- receiving data from mobile phone |
| 14th | 1st | ,• Switch on LED when data sensed is higherthan specified value. Interfacing Bluetooth module (e.g. HC05)- receiving data from mobile phone |
| | 2nd | • On Arduino and display on LCD Interfacing Relay module to demonstrate Bluetooth based home automation• application. (using Bluetooth and relay). |
| | 3rd | • On Arduino and display on LCD Interfacing Relay module to demonstrate Bluetooth based home automation• application. (using Bluetooth and relay). |
| | 4th | • On Arduino and display on LCD Interfacing Relay module to demonstrate Bluetooth based home automation• application. (using Bluetooth and relay). |
| 15th | 1st | • On Arduino and display on LCD Interfacing Relay module to demonstrate Bluetooth based home automation• application. (using Bluetooth and relay). |
| | 2nd | • On Arduino and display on LCD Interfacing Relay module to demonstrate Bluetooth based home automation• application. (using Bluetooth and relay). |
| | 3rd | • On Arduino and display on LCD Interfacing Relay module to demonstrate Bluetooth based home automation• application. (using Bluetooth and relay). |
| | 4th | • On Arduino and display on LCD Interfacing Relay module to demonstrate Bluetooth based home automation• application. (using Bluetooth and relay). |