

Lesson plan of 2021-22
(3RD SEMESTER CSE)

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| DISCIPLINE:CSE | SEMESTER:3RD | NAME OF THE TEACHING FACULTY: Anuradha Maharana |
| SUBJECT:CSA | NO.OF DAYS/PER WEEK CLASS ALLOTTED: 4 | SEMESTER FROM DATE: 01/10/2021 TO DATE: 08/01/2022 NO.OF WEEKS:15 |
| WEEK | CLASS DAY | THEORY/PRACTICAL TOPICS |
| 1 ST | 1 ST | Basic structure of computer hardware |
| | 2 ND | Basic Structure of computer hardware |
| | 3 RD | Functional Units |
| | 4 TH | Computer components |
| 2 ND | 1 ST | Performance measures |
| | 2 ND | Memory addressing & Operations |
| | 3 RD | Instructions & instruction Sequencing |
| | 4 TH | Fundamentals to instructions |
| 3 RD | 1 ST | Fundamentals to instructions |
| | 2 ND | Operands |
| | 3 RD | Op Codes |
| | 4 TH | Instruction formats |
| 4 TH | 1 ST | Addressing Modes |
| | 2 ND | Processor System |
| | 3 RD | Register Files |
| | 4 TH | Complete instruction execution |
| 5 TH | 1 ST | Complete instruction execution |
| | 2 ND | Fetch |
| | 3 RD | Decode |
| | 4 TH | Execution |
| 6 TH | 1 ST | Hardware control |
| | 2 ND | Hardware control |
| | 3 RD | Micro program control |
| | 4 TH | Memory System |
| 7 TH | 1 ST | Memory characteristics |
| | 2 ND | Memory characteristics |
| | 3 RD | Memory hierarchy |
| | 4 TH | Memory hierarchy |
| 8 TH | 1 ST | RAM and ROM organization |
| | 2 ND | Interleaved Memory |
| | 3 RD | Cache memory |
| | 4 TH | Cache memory |
| 9 TH | 1 ST | Virtual memory |
| | 2 ND | Input – Output System |
| | 3 RD | Input - Output Interface |
| | 4 TH | Modes of Data transfer |

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| 10 TH | 1 ST | Modes of Data transfer |
| | 2 ND | Programmed I/O Transfer |
| | 3 RD | Programmed I/O Transfer |
| | 4 TH | Interrupt driven I/O |
| 11 TH | 1 ST | Interrupt driven I/O |
| | 2 ND | DMA |
| | 3 RD | I/O Processor |
| | 4 TH | I/O Interface & Bus architecture |
| 12 TH | 1 ST | Bus and System Bus |
| | 2 ND | Types of System Bus |
| | 3 RD | Data Bus |
| | 4 TH | Address Bus Control |
| 13 TH | 1 ST | Bus Structure |
| | 2 ND | Bus Structure |
| | 3 RD | Basic Parameters of Bus design |
| | 4 TH | SCSI |
| 14 TH | 1 ST | USB |
| | 2 ND | . Parallel Processing |
| | 3 RD | Parallel Processing |
| | 4 TH | Linear Pipeline |
| 15 TH | 1 ST | Multiprocessor |
| | 2 ND | Multiprocessor |
| | 3 RD | Flynn"s Classification |
| | 4 TH | Flynn"s Classification |
| DISCIPLINE:CSE | SEMESTER:3RD | NAME OF THE TEACHING FACULTY: Sasmita Panigrahi |
| SUBJECT:DS | NO.OF DAYS/PER WEEK CLASS ALLOTTED: 4 | SEMESTER FROM DATE: 01/10/2021 TO DATE: 08/01/2022 NO.OF WEEKS:15 |
| WEEK | CLASS DAY | THEORY/PRACTICAL TOPICS |
| 1 ST | 1 ST | Explain Data, Information, data types |
| | 2 ND | Define data structure & Explain different operations Explain Abstract data types |
| | 3 RD | Discuss Algorithm & its complexity |
| | 4 TH | Explain Time, space tradeoff |
| 2 ND | 1 ST | Explain Basic Terminology, Storing Strings |
| | 2 ND | State Character Data Type, Discuss String Operations |
| | 3 RD | Discuss String Operations |
| | 4 TH | Give Introduction about array, Discuss Linear arrays, representation of linear array In memory |
| 3 RD | 1 ST | Explain traversing linear arrays, inserting & deleting elements |
| | 2 ND | Discuss multidimensional arrays, representation of two dimensional arrays in memory (row |

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| | | major order & column major order), and pointers |
| | 3 RD | Discuss multidimensional arrays, representation of two dimensional arrays in memory (row major order & column major order), and pointers |
| | 4 TH | Discuss multidimensional arrays, representation of two dimensional arrays in memory (row major order & column major order), and pointers |
| 4 TH | 1 ST | Explain sparse matrices. |
| | 2 ND | Explain sparse matrices. |
| | 3 RD | Give fundamental idea about Stacks and queues |
| | 4 TH | Give fundamental idea about Stacks and queues |
| 5 TH | 1 ST | Explain array representation of Stack |
| | 2 ND | Explain arithmetic expression ,polish notation & Conversion |
| | 3 RD | Explain arithmetic expression ,polish notation & Conversion |
| | 4 TH | Discuss application of stack, recursion |
| 6 TH | 1 ST | Discuss queues, circular queue, priority queues. |
| | 2 ND | Discuss queues, circular queue, priority queues. |
| | 3 RD | Give Introduction about linked list Explain representation of linked list in memory |
| | 4 TH | Discuss traversing a linked list, searching |
| 7 TH | 1 ST | Discuss traversing a linked list, searching, |
| | 2 ND | Discuss garbage collection. |
| | 3 RD | Explain Insertion into a linked list, Deletion from a linked list, header linked list |
| | 4 TH | Explain Insertion into a linked list, Deletion from a linked list, header linked list |
| 8 TH | 1 ST | Explain Insertion into a linked list, Deletion from a linked list, header linked list |
| | 2 ND | Explain Insertion into a linked list, Deletion from a linked list, header linked list |
| | 3 RD | Explain Basic terminology of Tree |
| | 4 TH | Explain Basic terminology of Tree |
| 9 TH | 1 ST | Discuss Binary tree, its representation and traversal, binary search tree, searching, |
| | 2 ND | Discuss Binary tree, its representation and traversal, binary search tree, searching, |
| | 3 RD | Discuss Binary tree, its representation and traversal, binary search tree, searching, |
| | 4 TH | Explain insertion & deletion in a binary search trees |
| 10 TH | 1 ST | Explain insertion & deletion in a binary search trees |
| | 2 ND | Explain insertion & deletion in a binary search trees |
| | 3 RD | Explain graph terminology & its representation, |
| | 4 TH | Explain graph terminology & its representation, |

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| 11 TH | 1 ST | Explain graph terminology & its representation, |
| | 2 ND | Explain Adjacency Matrix, Path Matrix |
| | 3 RD | Explain Adjacency Matrix, Path Matrix |
| | 4 TH | Explain Adjacency Matrix, Path Matrix |
| 12 TH | 1 ST | Discuss Algorithms for Bubble sort, Quick sort, |
| | 2 ND | Discuss Algorithms for Bubble sort, Quick sort, |
| | 3 RD | Discuss Algorithms for Bubble sort, Quick sort, |
| | 4 TH | Merging |
| 13 TH | 1 ST | Merging |
| | 2 ND | Linear searching, Binary searching |
| | 3 RD | Linear searching, Binary searching |
| | 4 TH | Linear searching, Binary searching |
| 14 TH | 1 ST | Discuss Different types of files organization and their access method, |
| | 2 ND | Discuss Different types of files organization and their access method, |
| | 3 RD | Discuss Different types of files organization and their access method, |
| | 4 TH | Discuss Different types of files organization and their access method, |
| 15 TH | 1 ST | Introduction to Hashing, Hash function, collision resolution, open addressing. |
| | 2 ND | Introduction to Hashing, Hash function, collision resolution, open addressing. |
| | 3 RD | Introduction to Hashing, Hash function, collision resolution, open addressing. |
| | 4 TH | Introduction to Hashing, Hash function, collision resolution, open addressing. |
| DISCIPLINE:CSE | SEMESTER:3RD | NAME OF THE TEACHING FACULTY: Smt Nayana Patel |
| SUBJECT:DE | NO.OF DAYS/PER WEEK CLASS ALLOTTED: 4 | SEMESTER FROM DATE: 01/10/2021 TO DATE: 08/01/2022 NO.OF WEEKS:15 |
| WEEK | CLASS DAY | THEORY/PRACTICAL TOPICS |
| 1 ST | 1 ST | Basics of Digital Electronics |
| | 2 ND | Number System-Binary, Octal, Decimal, Hexadecimal - Conversion from one system to another number system. |
| | 3 RD | Arithmetic Operation-Addition, Subtraction, Multiplication, Division, 1"s & 2"s complement of Binary numbers& Subtraction using complements method |
| | 4 TH | Arithmetic Operation-Addition, Subtraction, Multiplication, Division, 1"s & 2"s complement of Binary numbers& Subtraction using complements method |

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| 2 ND | 1 ST | Digital Code & its application & distinguish between weighted & non-weight Code, Binary codes, excess-3 and Gray codes. |
| | 2 ND | Digital Code & its application & distinguish between weighted & non-weight Code, Binary codes, excess-3 and Gray codes. |
| | 3 RD | Logic gates: AND,OR,NOT,NAND,NOR, Exclusive-OR, Exclusive-NOR--Symbol, Function, expression, truth table & timing diagram |
| | 4 TH | Logic gates: AND,OR,NOT,NAND,NOR, Exclusive-OR, Exclusive-NOR--Symbol, Function, expression, truth table & timing diagram |
| 3 RD | 1 ST | Universal Gates& its Realisation |
| | 2 ND | Boolean algebra, Boolean expressions, Demorgan`s Theorems. |
| | 3 RD | Represent Logic Expression: SOP & POS forms |
| | 4 TH | Karnaugh map (3 & 4 Variables)&Minimization of logical expressions ,don` t care conditions |
| 4 TH | 1 ST | Combinational Logic Circuits |
| | 2 ND | Half adder, Full adder, Half Subtractor, Full Subtractor, Serial and Parallel Binary 4 bit adder. |
| | 3 RD | Half adder, Full adder, Half Subtractor, Full Subtractor, Serial and Parallel Binary 4 bit adder. |
| | 4 TH | Half adder, Full adder, Half Subtractor, Full Subtractor, Serial and Parallel Binary 4 bit adder. |
| 5 TH | 1 ST | Multiplexer (4:1), De- multiplexer (1:4), Decoder, Encoder, Digital comparator (3 Bit) |
| | 2 ND | Multiplexer (4:1), De- multiplexer (1:4), Decoder, Encoder, Digital comparator (3 Bit) |
| | 3 RD | Multiplexer (4:1), De- multiplexer (1:4), Decoder, Encoder, Digital comparator (3 Bit) |
| | 4 TH | Multiplexer (4:1), De- multiplexer (1:4), Decoder, Encoder, Digital comparator (3 Bit) |
| 6 TH | 1 ST | Seven segment Decoder |
| | 2 ND | Seven segment Decoder |
| | 3 RD | Seven segment Decoder |
| | 4 TH | Seven segment Decoder |
| 7 TH | 1 ST | Sequential logic Circuits |
| | 2 ND | Principle of flip-flops operation, its Types |
| | 3 RD | Principle of flip-flops operation, its Types |
| | 4 TH | SR Flip Flop using NAND,NOR Latch (un clocked) |
| 8 TH | 1 ST | SR Flip Flop using NAND,NOR Latch (un clocked) |
| | 2 ND | SR Flip Flop using NAND,NOR Latch (un clocked) |
| | 3 RD | SR Flip Flop using NAND,NOR Latch (un clocked) |
| | 4 TH | C l o c k e d SR,D,JK,T,JK Master Slave flip-flops-Symbol, logic Circuit, truth table and applications |
| 9 TH | 1 ST | C l o c k e d SR,D,JK,T,JK Master Slave flip-flops- |

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| | | Symbol, logic Circuit, truth table and applications |
| | 2 ND | C l o c k e d SR,D,JK,T,JK Master Slave flip-flops- Symbol, logic Circuit, truth table and applications |
| | 3 RD | Concept of Racing and how it can be avoided. |
| | 4 TH | Concept of Racing and how it can be avoided. |
| 10 TH | 1 ST | Registers, Memories & PLD |
| | 2 ND | Shift Registers-Serial in Serial -out, Serial- in Parallel- out, Parallel in serial out and Parallel in parallel out |
| | 3 RD | Shift Registers-Serial in Serial -out, Serial- in Parallel- out, Parallel in serial out and Parallel in parallel out |
| | 4 TH | Universal shift registers-Applications |
| 11 TH | 1 ST | Types of Counter & applications |
| | 2 ND | Binary counter, Asynchronous ripple counter (UP & DOWN), Decade counter. Synchronous counter, Ring Counter. |
| | 3 RD | Concept of memories-RAM, ROM, static RAM, dynamic RAM,PS RAM |
| | 4 TH | Basic concept of PLD & applications |
| 12 TH | 1 ST | A/D and D/A Converters |
| | 2 ND | Necessity of A/D and D/A converters. |
| | 3 RD | D/A conversion using weighted resistors methods. |
| | 4 TH | D/A conversion using R-2R ladder (Weighted resistors) network. |
| 13 TH | 1 ST | D/A conversion using R-2R ladder (Weighted resistors) network. |
| | 2 ND | A/D conversion using counter method. |
| | 3 RD | A/D conversion using Successive approximate method |
| | 4 TH | LOGIC FAMILIES |
| 14 TH | 1 ST | Various logic families &categories according to the IC fabrication process |
| | 2 ND | Various logic families &categories according to the IC fabrication process |
| | 3 RD | Various logic families &categories according to the IC fabrication process |
| | 4 TH | Characteristics of Digital ICs- Propagation Delay, fan- out, fan-in, Power Dissipation ,Noise Margin ,Power Supply requirement &Speed with Reference to logic families. |
| 15 TH | 1 ST | Characteristics of Digital ICs- Propagation Delay, fan- out, fan-in, Power Dissipation ,Noise Margin ,Power Supply requirement &Speed with Reference to logic families. |
| | 2 ND | Characteristics of Digital ICs- Propagation Delay, fan- out, fan-in, Power Dissipation ,Noise Margin ,Power Supply requirement &Speed with Reference to logic families. |
| | 3 RD | Features, circuit operation &various applications of |

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| | | TTL(NAND), CMOS (NAND & NOR) |
| | 4 TH | Features, circuit operation & various applications of TTL(NAND), CMOS (NAND & NOR) |
| DISCIPLINE:CSE | SEMESTER:3RD | NAME OF THE TEACHING FACULTY:SMT REETANJALI PANDA |
| SUBJECT:OOM | NO.OF DAYS/PER WEEK CLASS ALLOTTED: 4 | SEMESTER FROM DATE: 01/10/2021 TO DATE: 08/01/2022 NO.OF WEEKS:15 |
| WEEK | CLASS DAY | THEORY/PRACTICAL TOPICS |
| 1 ST | 1 ST | Programming Languages |
| | 2 ND | Object Oriented Programming |
| | 3 RD | OOPS concepts and terminology |
| | 4 TH | Benefit of OOPS |
| 2 ND | 1 ST | Application of OOPS |
| | 2 ND | NTRODUCTION TO JAVA 2.1 What is Java |
| | 3 RD | Execution Model of Java 2.3 The Java Virtual Machine |
| | 4 TH | A First Java Program 2.5 Variables and Data types |
| 3 RD | 1 ST | Primitive Datatypes & Declarations |
| | 2 ND | Numeric and Character Literals 2.8 String Literals |
| | 3 RD | Arrays, Non-Primitive Datatypes |
| | 4 TH | Casting and Type Casting |
| 4 TH | 1 ST | Widening and Narrowing Conversions |
| | 2 ND | Operators and Expressions |
| | 3 RD | Control Flow Statements |
| | 4 TH | OBJECTS AND CLASSES 3.1 Concept and Syntax of class |
| 5 TH | 1 ST | Defining a Class 3.3 Concept and Syntax of Methods |
| | 2 ND | Defining Methods 3.5 Creating an Object |
| | 3 RD | Accessing Class Members 3.7 Instance Data and Class Data |
| | 4 TH | Constructors |
| 6 TH | 1 ST | Access specifiers |
| | 2 ND | Access Modifiers |
| | 3 RD | Access Control |
| | 4 TH | USING JAVA OBJECTS |
| 7 TH | 1 ST | String Builder and String Buffer |
| | 2 ND | Methods and Messages |
| | 3 RD | Methods and Messages |
| | 4 TH | Parameter Passing |
| 8 TH | 1 ST | Comparing and Identifying Objects |
| | 2 ND | INHERITANCE |
| | 3 RD | Inheritance in Java |
| | 4 TH | Use of Inheritance |
| 9 TH | 1 ST | Types of Inheritance |
| | 2 ND | Single Inheritance |
| | 3 RD | Multi-level Inheritance |

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| | 4 TH | Hierarchical Inheritance |
| 10 TH | 1 ST | Hybrid Inheritance |
| | 2 ND | POLYMORPHISM |
| | 3 RD | Types of Polymorphism |
| | 4 TH | Types of Polymorphism |
| 11 TH | 1 ST | Method Overloading |
| | 2 ND | Method Overloading |
| | 3 RD | Run time Polymorphism |
| | 4 TH | Run time Polymorphism |
| 12 TH | 1 ST | Method Overriding |
| | 2 ND | PACKAGES: PUTTING CLASSES TOGETHER 7.1 Introduction |
| | 3 RD | Java API Packages 7.3 Using System Packages |
| | 4 TH | Naming Convention 7.5 Creating Packages |
| 13 TH | 1 ST | Accessing a Package 7.7 Using a Package |
| | 2 ND | Adding a Class to Package |
| | 3 RD | Hiding Classes 7.10 Static Import |
| | 4 TH | JAVA FILES AND I/O 05 8.1 What is a stream |
| 14 TH | 1 ST | Reading and writing to files(only txt files 8.3 Input and Output Stream |
| | 2 ND | Manipulating Input data 8.5 Opening and Closing Streams |
| | 3 RD | Predefined streams |
| | 4 TH | File handling Classes and Methods |
| 15 TH | 1 ST | EXCEPTION HANDLING 9.1 Exceptions Overview |
| | 2 ND | Exception Keywords 9.3 Catching Exceptions |
| | 3 RD | Using Finally Statement 9.5 Exception Methods 9.6 Declaring Exceptions |
| | 4 TH | Defining and throwing exceptions 9.8 Errors and Runtime Exceptions |
| DISCIPLINE:CSE | SEMESTER:3RD | NAME OF THE TEACHING FACULTY: Sri Lakshmi Dhar Sethy |
| SUBJECT: ES | NO.OF DAYS/PER WEEK CLASS ALLOTTED: 4 | SEMESTER FROM DATE: 01/10/2021 TO DATE: 08/01/2022 NO.OF WEEKS:15 |
| WEEK | CLASS DAY | THEORY/PRACTICAL TOPICS |
| 1 ST | 1 ST | The Multidisciplinary nature of environmental studies: |
| | 2 ND | Definition |
| | 3 RD | scope and importance |
| | 4 TH | Need for public awareness |
| 2 ND | 1 ST | Natural Resources: Renewable and non-renewable resources: a) Natural resources and associated problems. |
| | 2 ND | Forest resources: Use and over-exploitation, deforestation, case studies, Timber extraction mining,damsandtheireffectsonforestsandtribal people. |

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| | 3 RD | Forest resources: Use and over-exploitation, deforestation, case studies, Timber extraction mining, dams and their effects on forests and tribal people. |
| | 4 TH | Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dam's benefits and problems. |
| 3 RD | 1 ST | . Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dam's benefits and problems. |
| | 2 ND | Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources. |
| | 3 RD | Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources. |
| | 4 TH | Food Resources: World food problems, changes caused by agriculture and over grazing, effects of modern agriculture, fertilizers- pesticides problems, water logging, salinity,. |
| 4 TH | 1 ST | Energy Resources: Growing energy need, renewable and non-renewable energy sources, use of alternate energy sources, case studies. |
| | 2 ND | Land Resources: Land as a resource, land degradation, man induces landslides, soil erosion, and desertification. B) Role of individual in conservation of natural resources. C) Equitable use of resources for sustainable life styles. |
| | 3 RD | Systems: Concept of an eco-system. |
| | 4 TH | Structure and function of an eco-system. |
| 5 TH | 1 ST | Producers, consumers, decomposers. 3.4. Energy flow in the eco systems. |
| | 2 ND | Ecological succession. |
| | 3 RD | Food chains, food webs and ecological pyramids. |
| | 4 TH | Introduction, types, characteristic features, structure and function of the following eco system: |
| 6 TH | 1 ST | Forest ecosystem: |
| | 2 ND | Aquatic eco systems (ponds, streams, lakes, rivers, oceans, estuaries). |
| | 3 RD | Biodiversity and it's Conservation: 4.1. Introduction- Definition: genetics, species and ecosystem diversity. |
| | 4 TH | Biogeographically classification of India. |
| 7 TH | 1 ST | Value of biodiversity: consumptive use, productive use, social ethical, aesthetic and optin values. |
| | 2 ND | Value of biodiversity: consumptive use, productive use, social ethical, aesthetic and optin values. |
| | 3 RD | Biodiversity at global, national and local level. |

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| | 4 TH | Biodiversity at global, national and local level. |
| 8 TH | 1 ST | Threats to biodiversity: Habitats loss, poaching of wild life, man wildlife conflicts. |
| | 2 ND | Environmental Pollution: 5.1. Definition Causes, effects and control measures of: |
| | 3 RD | a) Air pollution. B) Water pollution. |
| | 4 TH | c) Soil pollution d) Marine pollution |
| 9 TH | 1 ST | e) Noise pollution. |
| | 2 ND | f) Thermal pollution |
| | 3 RD | g) Nuclear hazards. |
| | 4 TH | Solid waste Management: Causes, effects and control measures of urban and industrial wastes. |
| 10 TH | 1 ST | Solid waste Management: Causes, effects and control measures of urban and industrial wastes. |
| | 2 ND | Role of an individual in prevention of pollution. |
| | 3 RD | Role of an individual in prevention of pollution. |
| | 4 TH | Disaster management: Floods, earth quake, cyclone and landslides. |
| 11 TH | 1 ST | Disaster management: Floods, earth quake, cyclone and landslides. |
| | 2 ND | Social issues and the Environment: |
| | 3 RD | Form unsustainable to sustainable development. |
| | 4 TH | Urban problems related to energy. |
| 12 TH | 1 ST | Water conservation, rain water harvesting, water shed management. |
| | 2 ND | Resettlement and rehabilitation of people; its problems and concern. |
| | 3 RD | Environmental ethics: issue and possible solutions. |
| | 4 TH | Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies. |
| 13 TH | 1 ST | Air (prevention and control of pollution) Act. |
| | 2 ND | Water (prevention and control of pollution) Act. |
| | 3 RD | Public awareness. |
| | 4 TH | Human population and the environment: |
| 14 TH | 1 ST | Population growth and variation among nations. |
| | 2 ND | Population explosion- family welfare program. |
| | 3 RD | Environment and human health. |
| | 4 TH | Human rights. |
| 15 TH | 1 ST | Value education |
| | 2 ND | Role of information technology in environment and human health. |
| | 3 RD | Role of information technology in environment and human health. |
| | 4 TH | Role of information technology in environment and human health. |

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| DISCIPLINE: CSE | SEMESTER: 3 RD | NAME OF THE TEACHING FACULTY: Sasmita Panigrahi & Sri. Abhiram Behera |
| SUBJECT: DS LAB | NO.OF DAYS/PER WEEK CLASS ALLOTTED: 4 | SEMESTER FROM DATE: 01/10/2021 TO DATE: 08/01/2022 NO.OF WEEKS: 15 |
| WEEK | DATE | TOPICS TO BE COVERED AS PER LESSON PLAN |
| 1 ST | 1 ST | Implementation of 1D & 2D Array |
| | 2 ND | Implementation of 1D & 2D Array |
| | 3 RD | Implementation of 1D & 2D Array |
| | 4 TH | Implementation of 1D & 2D Array |
| 2 ND | 1 ST | Implementation of Stack |
| | 2 ND | Implementation of Stack |
| | 3 RD | Implementation of Stack |
| | 4 TH | Implementation of Stack |
| 3 RD | 1 ST | Pointer and it"s application. |
| | 2 ND | Pointer and it"s application. |
| | 3 RD | Pointer and it"s application. |
| | 4 TH | . Pointer and it"s application. |
| 4 TH | 1 ST | Structure & Union |
| | 2 ND | Structure & Union |
| | 3 RD | Structure & Union |
| | 4 TH | Structure & Union |
| 5 TH | 1 ST | Implementation of insertion & deletion in Stack |
| | 2 ND | Implementation of insertion & deletion in Stack |
| | 3 RD | Implementation of insertion & deletion in Stack |

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| | 4 TH | Implementation of insertion & deletion in Stack |
| 6 TH | 1 ST | Implementation of insertion & deletion in Queue |
| | 2 ND | Implementation of insertion & deletion in Queue |
| | 3 RD | Implementation of insertion & deletion in Queue |
| | 4 TH | Implementation of insertion & deletion in Queue |
| 7 TH | 1 ST | Implementation of insertion & deletion in Linked list |
| | 2 ND | Implementation of insertion & deletion in Linked list |
| | 3 RD | Implementation of insertion & deletion in Linked list |
| | 4 TH | Implementation of insertion & deletion in Linked list |
| 8 TH | 1 ST | Implementation of Bubble sort |
| | 2 ND | Implementation of Bubble sort |
| | 3 RD | Implementation of Bubble sort |
| | 4 TH | Implementation of Bubble sort |
| 9 TH | 1 ST | Implementation of Quick sort |
| | 2 ND | Implementation of Quick sort |
| | 3 RD | Implementation of Quick sort |
| | 4 TH | Implementation of Quick sort |
| 10 TH | 1 ST | Implementation of Binary tree traversal |
| | 2 ND | Implementation of Binary tree traversal |
| | 3 RD | Implementation of Binary tree traversal |
| | 4 TH | Implementation of Binary tree traversal |
| 11 TH | 1 ST | Implementation of Linear search |
| | 2 ND | Implementation of Linear search |
| | 3 RD | Implementation of Linear search |

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| | 4 TH | Implementation of Linear search |
| 12 TH | 1 ST | Implementation of Binary search |
| | 2 ND | Implementation of Binary search |
| | 3 RD | Implementation of Binary search |
| | 4 TH | Implementation of Binary search |
| 13 TH | 1 ST | Implementation of Binary search |
| | 2 ND | Implementation of Binary search |
| | 3 RD | Implementation of Binary search |
| | 4 TH | Implementation of Binary search |
| 14 TH | 1 ST | Implementation of Binary search |
| | 2 ND | Implementation of Binary search |
| | 3 RD | Implementation of Binary search |
| | 4 TH | Implementation of Binary search |
| 15 TH | 1 ST | Implementation of Binary search |
| | 2 ND | Implementation of Binary search |
| | 3 RD | Implementation of Binary search |
| | 4 TH | Implementation of Binary search |
| DISCIPLINE:CSE/IT | SEMESTER:3RD | NAME OF THE TEACHING FACULTY: Smt Nayana Patel & Smt K Tanaya Acharya |
| SUBJECT:OOP LAB | NO.OF DAYS/PER WEEK CLASS ALLOTTED:4 | SEMESTER FROM DATE: 01/10/2021 TO DATE: 08/01/2022 NO.OF WEEKS:15 |
| WEEK | CLASS DAY | THEORY/PRACTICAL TOPICS |
| 1 st | 1 st | Write a Java program to print 'Hello' on screen and then print your name on a separate line. |
| | 2 nd | Write a Java program to print the sum of two numbers. |

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| | 3 rd | Write a Java program that takes a number as input and prints its multiplication table upto 10. |
| | 4 th | Write a Java program to print the area and perimeter of a rectangle |
| 2 nd | 1 st | Write a Java program to swap two variables. |
| | 2 nd | Write a Java program to convert a decimal number to binary number. |
| | 3 rd | Write a Java program to compare two numbers. |
| | 4 th | Write a Java program and compute the sum of the digits of an integer. |
| 3 rd | 1 st | Write a Java program to count the letters, spaces, numbers and other characters of an input string. |
| | 2 nd | Write a Java program to reverse a string. |
| | 3 rd | Write a Java program to accept a number and check the number is even or not. Prints 1 if the number is even or 0 if the number is odd. |
| | 4 th | Write a Java program that accepts two integer values from the user and return the larger values. However if the two values are the same, return 0 and return the smaller value if the two values have the same remainder when divided by 6 |
| 4 th | 1 st | Write a Java program to get the larger value between first and last element of an array (length 3) of integers . |
| | 2 nd | Design a class to represent a bank account. Include the following members : Data members: Name of the depositor• Account Number• Type of account• Balance amount in the account• |
| | 3 rd | Methods: To assign initial values• To deposit an amount• To withdraw an amount• To display the name and balance• |
| | 4 th | Methods: To assign initial values• To deposit an amount• To withdraw an amount• To display the name and balance• |
| 5 th | 1 st | Given are two one-dimensional arrays, A and B which are sorted in ascending order. |

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| | | Write a program to merge them into a single sorted array C that contains every item from arrays A and B, in ascending order. |
| | 2 nd | Given are two one-dimensional arrays, A and B which are sorted in ascending order. Write a program to merge them into a single sorted array C that contains every item from arrays A and B, in ascending order. |
| | 3 rd | Given are two one-dimensional arrays, A and B which are sorted in ascending order. Write a program to merge them into a single sorted array C that contains every item from arrays A and B, in ascending order. |
| | 4 th | Given are two one-dimensional arrays, A and B which are sorted in ascending order. Write a program to merge them into a single sorted array C that contains every item from arrays A and B, in ascending order. |
| 6 ^h | 1 st | Write a java program implementing multiple inheritance. |
| | 2 nd | Write a java program implementing multiple inheritance. |
| | 3 rd | Write a java program implementing multiple inheritance. |
| | 4 th | Write a java program implementing multiple inheritance. |
| 7 th | 1 st | Write a java program implementing package. |
| | 2 nd | Write a java program implementing package. |
| | 3 rd | Write a java program implementing package. |
| | 4 th | Write a java program implementing package. |
| 8 th | 1 st | Write a java program to read a file line byline and print the line on the output screen. |
| | 2 nd | Write a java program to read a file line byline and print the line on the output screen. |
| | 3 rd | Write a java program to read a file line byline and print the line on the output screen. |
| | 4 th | Write a java program to read a file line byline and print the line on the output screen. |

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| 9 th | 1 st | Write a java program to read content from one file and write it into another file. |
| | 2 nd | Write a java program to read content from one file and write it into another file. |
| | 3 rd | Write a java program to read content from one file and write it into another file. |
| | 4 th | Write a java program to read content from one file and write it into another file. |
| 10 th | 1 st | Define an exception called "No Match Exception" that is thrown when a string is not equal to "India". Write a program that uses this exception. |
| | 2 nd | Define an exception called "No Match Exception" that is thrown when a string is not equal to "India". Write a program that uses this exception. |
| | 3 rd | Define an exception called "No Match Exception" that is thrown when a string is not equal to "India". Write a program that uses this exception. |
| | 4 th | Define an exception called "No Match Exception" that is thrown when a string is not equal to "India". Write a program that uses this exception. |
| 11 th | 1 st | Define an exception called "No Match Exception" that is thrown when a string is not equal to "India". Write a program that uses this exception. |
| | 2 nd | Define an exception called "No Match Exception" that is thrown when a string is not equal to "India". Write a program that uses this exception. |
| | 3 rd | Define an exception called "No Match Exception" that is thrown when a string is not equal to "India". Write a program that uses this exception. |
| | 4 th | Define an exception called "No Match Exception" that is thrown when a string is not |

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| | | equal to "India". Write a program that uses this exception. |
| 12 th | 1 st | Develop a java project for percentage calculator/temperature conversion tool. |
| | 2 nd | Develop a java project for percentage calculator/temperature conversion tool. |
| | 3 rd | Develop a java project for percentage calculator/temperature conversion tool. |
| | 4 th | Develop a java project for percentage calculator/temperature conversion tool. |
| 13 th | 1 st | Develop a java project for percentage calculator/temperature conversion tool. |
| | 2 nd | Develop a java project for percentage calculator/temperature conversion tool. |
| | 3 rd | Develop a java project for percentage calculator/temperature conversion tool. |
| | 4 th | Develop a java project for percentage calculator/temperature conversion tool. |
| 14 th | 1 st | Develop a java project for percentage calculator/temperature conversion tool. |
| | 2 nd | Develop a java project for percentage calculator/temperature conversion tool. |
| | 3 rd | Develop a java project for percentage calculator/temperature conversion tool. |
| | 4 th | Develop a java project for percentage calculator/temperature conversion tool. |
| 15 th | 1 st | Develop a java project for percentage calculator/temperature conversion tool. |
| | 2 nd | Develop a java project for percentage calculator/temperature conversion tool. |
| | 3 rd | Develop a java project for percentage calculator/temperature conversion tool. |
| | 4 th | Develop a java project for percentage calculator/temperature conversion tool. |
| DISCIPLINE: CSE/IT | SEMESTER: 3rd | NAME OF THE TEACHING FACULTY: Smt Nayana Patel & Smt K Tanaya Acharya |
| SUBJECT: OA LAB | NO.OF DAYS/PER WEEK CLASS ALLOTTED:4 | SEMESTER FROM DATE: 01/10/2021 TO DATE: 08/01/2022 |

| | | NO.OF WEEKS:15 |
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| WEEK | CLASS DAY | Create a news-paper document with at least 200 words, a. Use margins as, top:1.5, bottom:2, left:2, right:1 inches. b. Use heading "Gandhi Jayanti", font size: 16, font color: red, font face: Arial Black. |
| 1 ST | 1 ST | c. With first letter "dropped" (use drop cap option) of the first paragraph containing a picture at the right side d. Use three columns from the second paragraph onwards till the half of the page. e. Then use heading "Computer basics" f. Create paragraph using two columns till the end of the page |
| | 2 ND | Create a Mathematical question paper using, at least five equations a. With fractions, exponents, summation function |
| | 3 RD | Create a Mathematical question paper using, at least five equations a. With fractions, exponents, summation function |
| | 4 TH | b. With at least one „m*n“ matrix |
| 2 ND | 1 ST | c. Basic mathematical and geometric operators. |
| | 2 ND | d. Use proper text formatting, page color and page border |
| | 3 RD | Create a flowchart using, a. Proper shapes like ellipse, arrows, rectangle, and parallelogram. |
| | 4 TH | Create a flowchart using, a. Proper shapes like ellipse, arrows, rectangle, and parallelogram. |
| 3 RD | 1 ST | b. Use grouping to group all the parts of the flowchart into one single object |
| | 2 ND | Create a table using table menu with, a. At least 5 columns and 10 rows |
| | 3 RD | b. Merge the first row into one cell. |
| | 4 TH | c. Merge the second row into one cell, then split the second row into three cells |
| 4 TH | 1 ST | . d. Use proper table border and color. |
| | 2 ND | e. Insert proper content into the table with proper text formatting |
| | 3 RD | Create a table using two columns, a. The left column contains all the short-cut keys and right side column contains the function of the short-cut keys. |
| | 4 TH | Create a table using two columns, a. The left column contains all the short-cut keys and right side column contains the function of the short- |

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| | | cut keys. |
| 5 TH | 1 ST | b. Insert a left column using layout option. Name the heading as Serial No |
| | 2 ND | Create two letters with the following conditions in Ms Word and find the difference. a. Write a personal letter to your friend using at least 100 words and two paragraphs. The date must be in top-right corner. Use „justify“ text alignment and 1.5 line spacing for the body of the letter. Letter must contain proper salutation and closing. |
| | 3 RD | Create two letters with the following conditions in Ms Word and find the difference. a. Write a personal letter to your friend using at least 100 words and two paragraphs. The date must be in top-right corner. Use „justify“ text alignment and 1.5 line spacing for the body of the letter. Letter must contain proper salutation and closing. |
| | 4 TH | Create two letters with the following conditions in Ms Word and find the difference. a. Write a personal letter to your friend using at least 100 words and two paragraphs. The date must be in top-right corner. Use „justify“ text alignment and 1.5 line spacing for the body of the letter. Letter must contain proper salutation and closing. |
| 6 TH | 1 ST | Create two letters with the following conditions in Ms Word and find the difference. a. Write a personal letter to your friend using at least 100 words and two paragraphs. The date must be in top-right corner. Use „justify“ text alignment and 1.5 line spacing for the body of the letter. Letter must contain proper salutation and closing. |
| | 2 ND | b. Use step by step mail-merge wizard to design a letter. (Mailing <input type="checkbox"/> step by step mail merge wizard <input type="checkbox"/> letters <input type="checkbox"/> start from a template <input type="checkbox"/> select template <input type="checkbox"/> letters <input type="checkbox"/> select proper template <input type="checkbox"/> create new document <input type="checkbox"/> OK) |
| | 3 RD | b. Use step by step mail-merge wizard to |

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| | | design a letter. (Mailing <input type="checkbox"/> step by step mail merge wizard <input type="checkbox"/> letters <input type="checkbox"/> start from a template <input type="checkbox"/> select template <input type="checkbox"/> letters <input type="checkbox"/> select proper template <input type="checkbox"/> create new document <input type="checkbox"/> OK) |
| | 4 TH | Create a letter, which must be sent to multiple recipients. |
| 7 TH | 1 ST | a. Use Mail-Merge to create the recipient list |
| | 2 ND | b. Use excel sheet to enter the recipient |
| | 3 RD | c. Start the mail merge using letter and directory format. State the difference |
| | 4 TH | Create a table "Student result" with following conditions. a. The heading must contain, Sl. No., Name, Mark1, Mark2, Mark3, Total, average and result with manual entry. |
| 8 TH | 1 ST | b. Use formulas for total and average |
| | 2 ND | c. Find the name of the students who has secured the highest and lowest marks. |
| | 3 RD | d. Round the average to the nearest highest integer and lowest integer (use ceiling and floor function respectively). |
| | 4 TH | Do as directed a. Create a notepad file as per the following fields Sln0 name th1 th2 th3 th4 th5 total % grade |
| 9 TH | 1 ST | b. Import this notepad file into excel sheet using „data from text" option. |
| | 2 ND | c. Grade is calculated as, i. If %>=90, then grade A ii. If %>=80 and <90, then grade B iii. If %>=70 and <80, then grade C iv. If %>=60 and <70, then grade D v. If %<60, then grade F |
| | 3 RD | c. Grade is calculated as, i. If %>=90, then grade A ii. If %>=80 and <90, then grade B iii. If %>=70 and <80, then grade C iv. If %>=60 and <70, then grade D v. If %<60, then grade F |
| | 4 TH | Create a sales table using the following data a. Draw the bar-graph to compare the sales of the three items for four years using insert option. |
| 10 TH | 1 ST | b. Draw a line-graph to compare the sales of three items for four years using insert option. |
| | 2 ND | c. Draw different pie-charts for the given data using insert option. |
| | 3 RD | d. Use condition, to highlight all the cells having value >=1000 with red color (use conditional formatting). |
| | 4 TH | Create a power-point presentation with minimum 5 |

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| | | slides. |
| 11 TH | 1 ST | a. The first slide must contain the topic of the presentation and name of the presentation. |
| | 2 ND | b. Must contain at least one table. |
| | 3 RD | c. Must contain at least 5 bullets, 5 numbers |
| | 4 TH | d. The heading must be, font size:32, font-face: Arial Rounded MT Bold, font-color: blue. |
| 12 TH | 1 ST | e. The body must be, font size: 24, font-face: Comic Sans MS, font-color: green. f. Last slide must contain „thank you |
| | 2 ND | Create a power-point presentation with minimum 10 slides 24 |
| | 3 RD | a. Use word art to write the heading for each slides. |
| | 4 TH | b. Insert at least one clip-art, one picture |
| 13 TH | 1 ST | c. Insert at least one audio and one video d. Hide at least two slides |
| | 2 ND | Create a power-point presentation with minimum 5 slides a. Use custom animation option to animate the text; the text must move left to right one line at a time. |
| | 3 RD | b. Use proper transition for the slides |
| | 4 TH | Create a database “Student” with, a. At least one table named “mark sheet” with field name “student name, roll number, mark1, mark2, mark3, mark4, total” |
| 14 TH | 1 ST | b. The data types are, student name: text, roll number: number, mark1 to mark4: number, total: number. Roll number must be the primary key. |
| | 2 ND | c. Enter data in the table. The total must be calculated using update query. |
| | 3 RD | d. Use query for sorting the table according to the descending/ascending order of the total marks. |
| | 4 TH | With addition to the table above, a. Add an additional field “result” to the “mark sheet” table. |
| 15 TH | 1 ST | b. Enter data for at least 10 students |
| | 2 ND | c. Calculate the result for all the students using update queries, if total \geq 200, then pass, else fail |
| | 3 RD | d. Search the students, whose name starts with “sh”. |
| | 4 TH | e. Show the names and total marks of the students who have passed the examination |

