



Dnyanopasak Shikshan Mandal's
College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: More A. D.
Science

Department: Computer

Program: BSc FY

Subject: Computer Science

Course Code: OCS-101

Paper Title: Programming Logic Concepts

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	UNIT I	Introduction, Generation of Computer, Classification of Computers, Hardware, Software, Applications of Computers, Computer Architecture: Central Processing Unit: Arithmetic Unit, Logic Unit, Control Unit, Main Memory Unit, Types of Memory, Input & Output Devices.	Understanding different parts of computers.
II	UNIT II	Introduction to Number systems, the problem solving aspects, top-down design, introduction to Algorithms, implementation of algorithms, the efficiency of algorithms, The analysis of algorithms, Flowchart and its symbols.	Understand how to solve problems using computers.
III	UNIT III	Exchanging the value of two variables, Counting, Summation of set of numbers, Factorial Computation, Generation of the Fibonacci sequence, reverses the Digits of an Integer.	Design algorithms to solve different problems.

IV	UNIT IV	The Smallest divisors of an integer, Generating prime numbers, Definition and Memory Representation of Array, Array order reversal, Array Counting, Finding the Maximum number in a set, sorting by exchange, Binary Search.	Design algorithms to solve different problems.
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Specify Course Outcome:

1. Student will be able to design algorithms to solve different problems
2. Student will understand how to solve problems using computers

Specify Program Outcome:

- To develop understanding of problem solving using computers.
- To develop understanding of basic data structures such as arrays.
- Develop skills in analyzing the usability of a web site.
- Understand how to plan and conduct user research related to web usability.
- Learn techniques of responsive web design, including media.
- To solve problems using data structures such as linear lists, stacks, queues, hash
- Tables, binary trees, heaps, binary search trees, and graphs and writing programs for
- These solutions.
- Able to write well-structured procedure-oriented programs.
- The course aims to provide exposure to problem-solving through programming.
- It aims to train the student to the basic concepts of the C-programming language.
- Develop skills in analyzing the usability of a web site.
- Understand how to plan and conduct user research related to web usability.
- 14 Learn techniques of responsive web design, including media

Signature of Teacher



Dnyanopasak Shikshan Mandal's
College of Arts, Commerce and Science, Parbhani

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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mundhe A.S.

Department: Computer Science

Program: BSc FY

Subject: Computer Science

Course Code: OCS-102

Paper Title: Designing of Web Pages Using HTML

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	UNIT I	Internet, The Important of the Internet, World Wide Web, URLs, Web Brewers, Webserver, Internet Services, The web flow, objectives of the website, basic interface design, developing a store board for the website, navigation and links within the site, checklist for designing.	Understand the Web Browser and Internet
II	UNIT II	HTML, Basic elements, Lists, Linking HTML pages, Linking to URLs, Text formatting, Text Alignment, Character Styles, Fonts and Font Sizes, Using Colors for the Web, Preformatted text, Horizontal lines, Line break, displaying special characters.	able to <i>use</i> the HTML programming language
III	UNIT III	Images in HTML Pages, Tables in HTML, Frames, Creating Frames, frame attribute linking, complex framesets, Inline frames, Image maps	Understand the principles of creating an effective web page.
IV	UNIT IV	Form designing, Additional Layout features, Intro to CGI Scripting, Active Server Pages,	Understand the principles of creating an effective web page.

		Introduction to Embedding Multimedia and Java Applets, Inserting sound/Audio into Web Pages, Video file formats, Creating Marquee. Into. to JavaScript and Dynamic HTML, Structure of JavaScript.	
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Specify Course Outcome:

1. Be able to *use* the HTML programming language
2. Understand the principles of creating an effective web page.

Specify Program Outcome:

- To develop understanding of problem solving using computers.to develop understanding of basic data structures such as arrays.
- Develop skills in analyzing the usability of a web site.
- Understand how to plan and conduct user research related to web usability.
- Learn techniques of responsive web design, including media.
- To solve problems using data structures such as linear lists, stacks, queues, hash
- Tables, binary trees, heaps, binary search trees, and graphs and writing programs for
- These solutions.
- Able to write well-structured procedure-oriented programs.
- The course aims to provide exposure to problem-solving through programming.
- It aims to train the student to the basic concepts of the C-programming language.
- Develop skills in analyzing the usability of a web site.
- Understand how to plan and conduct user research related to web usability.
- Learn techniques of responsive web design, including media

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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: More A. D.
Science

Department: Computer

Program: BSc FY

Subject: Computer Science

Course Code: OCS-103

Paper Title: Introduction to Data Structure

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	UNIT I	Definition of Data Structure, Elementary data organization, data structure operations, Algorithmic notations, Control structure.	Develop knowledge of data structures.
II	UNIT II	Introduction to Linked list, Representation of linked list in memory, Traversing, Searching in Unsorted linked list, Overflow and Underflow, Inserting at the beginning of a list, deleting node following a given Node.	Solve problems using linear lists.
III	UNIT III	Stack: Introduction, Memory representation of Stack, Insert element in Stack i.e. PUSH operation, Delete element from Stack i.e. POP operation. Queue: Introduction, Memory Representation, Insert & Delete operation in Queue.	Solve problems using stack & queue.
IV	UNIT IV	Tree: Introduction, definition of a Binary tree & its Memory representation, Traversing a Binary Tree, PREORDER, INORDER, POSTORDER Traversal, Threaded binary tree. Graph: Introduction, Memory Representation of graphs.	Solve problems using tree.

Specify Course Outcome:

1. To develop application using data structures.
2. Students develop knowledge of applications of data structures including the ability to implement algorithms for the creation, insertion, deletion, searching etc.

Specify Program Outcome:

- To develop understanding of problem solving using computers
- To develop understanding of basic data structures such as arrays
- Develop skills in analyzing the usability of a web site.
- Understand how to plan and conduct user research related to web usability.
- Learn techniques of responsive web design, including media
- To solve problems using data structures such as linear lists, stacks, queues, hash
- Tables, binary trees, heaps, binary search trees, and graphs and writing programs for
- These solutions.
- Able to write well-structured procedure-oriented programs
- The course aims to provide exposure to problem-solving through programming.
- It aims to train the student to the basic concepts of the C-programming language.
- Develop skills in analyzing the usability of a web site.
- Understand how to plan and conduct user research related to web usability.
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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mundhe A. S.

Department: Computer Science

Program: BSc FY

Subject: Computer Science

Course Code: OCS 104

Paper Title: Programming in C Language

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	UNIT I	Introduction to C, Character set, C tokens, Constant and Variables, Data types, declaration of variables, assigning values to Variables, Input /Output Statement, all Operators and Structure of C program.	Introduces the features of the C language.
II	UNIT II	If Statement, If-Else statement, Nesting of If-Else statement, switch Statement, goto, Looping statements, while loop, do-While, for loop, nested loop.	to develop logics Which will help them to create programs, applications in C.
III	UNIT III	Introduction to Array, types of array declaration and initialization, introduction to function, recursion, standard library string handling functions: strlen(), strcpy(), strcmp(), strcat()., Storage Classes: auto, static, register, extern	to provide exposure to problem-solving through programming.
IV	UNIT IV	Introduction to Function, Introduction to Structure and Union, Defining Structure and Accessing Structure members, Introduction to Concept of File Handling.	Introduces the more advanced features of the C language.

Specify Course Outcome:

1. Course is designed to provide complete knowledge of *C* language to develop logics
Which will help them to create programs, applications in *C*.
2. Introduces the more advanced features of the *C* language.

Specify Program Outcome:

- To develop understanding of problem solving using computers
- To develop understanding of basic data structures such as arrays
- Develop skills in analyzing the usability of a web site.
- Understand how to plan and conduct user research related to web usability.
- Learn techniques of responsive web design, including media
- To solve problems using data structures such as linear lists, stacks, queues, hash
- Tables, binary trees, heaps, binary search trees, and graphs and writing programs for
- These solutions.
- Able to write well-structured procedure-oriented programs
- The course aims to provide exposure to problem-solving through programming.
- It aims to train the student to the basic concepts of the *C*-programming language.
- Develop skills in analyzing the usability of a web site.
- Understand how to plan and conduct user research related to web usability.
- Learn techniques of responsive web design, including media

Signature of Teacher



Dnyanopasak Shikshan Mandal's
College of Arts, Commerce and Science, Parbhani

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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: More A. D.
Science

Department: Computer

Program: BSc FY **Subject: Computer Science**

Course Code: OCS-105

Paper Title: OCS-105(Lab)

Unit Number	Topics	Unit-wise Outcome
1	Body structure of HTML	Learn syntax of HTML tag & execute program.
2	List in HTML	
3	Linking HTML Pages	
4	Text Formatting	
5	Formatting in HTML	
6	Images in HTML	
7	Linking Images	
8	Tables in HTML	
9	Frames in HTML	
10	Forms in HTML	
11	Write a program in C to interchange the values of two variables.	Design algorithm & draw flowchart & execute program.
12	Write a program in C for summation of set of numbers.	
13	Write a program in C to find maximum number among given numbers.	
14	Write a program in C for linear search.	
15	Write a program in C for bubble sort.	
16	Write a program in C for prime numbers.	

17	Write a program in C using pointers.	
18	Write a program in C using function.	
19	Write a program in C for string operation.	
20	Write a program in C using structure.	

Specify Course Outcome:

1. To develop application using data structures.
2. Students develop knowledge of applications of data structures including the ability to Implement algorithms for the creation, insertion, deletion, searching etc.

Specify Program Outcome:

- To develop understanding of problem solving using computers
- To develop understanding of basic data structures such as arrays
- Develop skills in analyzing the usability of a web site.
- Understand how to plan and conduct user research related to web usability.
- Learn techniques of responsive web design, including media
- To solve problems using data structures such as linear lists, stacks, queues, hash
- Tables, binary trees, heaps, binary search trees, and graphs and writing programs for
- These solutions.
- Able to write well-structured procedure-oriented programs
- The course aims to provide exposure to problem-solving through programming.
- It aims to train the student to the basic concepts of the C-programming language.
- Develop skills in analyzing the usability of a web site.
- Understand how to plan and conduct user research related to web usability.
- Learn techniques of responsive web design, including media

Signature of Teacher



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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: More A. D.

Department: Computer Science

Program: BSc SY Subject: Computer Science

Course Code: VI

Paper Title: Operating System

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	Overview of Operating System	Introduction, What Operating Systems Do, Computer-System Organization, Computer- System Architecture, Special-Purpose Systems, Operating-System Structure, Operating-System Operations, Process Management, Memory Management, Storage Management, Protection and Security, Distributed Systems, Special-Purpose Systems, Computing Environments	Understand operating system. Different types of operating system.
II	Exploring Operating System	Operating-System Services, User Operating-System Interface, System Calls, Types of System Calls, System Programs, Operating-System Design and Implementation, Operating-System Structure, Virtual Machines, Operating-System Generation, System Boot.	Understand functions of operating system.
III	Process & Threads	Process Concept, Process Scheduling, Operations on Processes, Inter-process Communication, Examples of IPC Systems, Communication in Client- Server Systems,	Understand Process management.

		Overview of threads, Multithreading Models.	
IV	Memory	Background, Swapping, Contiguous Memory Allocation, Paging, Structure of the Page Table, Segmentation, virtual memory.	Understand Memory management.
V	File System	File Concept, Access Methods, Directory Structure, File-System Mounting, File Sharing, Protection, File-System Structure.	Understand File management.
VI	Protection in Operating System	Goals of Protection, Principles of Protection, Domain of Protection, Access Matrix, Implementation of Access Control, Revocation of Access Rights, Capability-Based Systems, Language-Based Protection.	Study security in operating system.

Specify Course Outcome:

1. Study parts of operating system
2. Study different function of operating system.

Specify Program Outcome:

1. Study different operating system.
2. Analysis basic networking system.
3. The course aims to provide exposure to problem-solving through programming.
4. It aims to train the student to the basic concepts of the C++-programming language.
5. Build an understanding of the fundamental concepts of computer networking.
6. Familiarize the student with the basic taxonomy and terminology of the computer networking area.
7. Introduce the student to advanced networking concepts, preparing the student for entry Advanced courses in computer networking.
8. The course aims to provide exposure to problem-solving through programming.
9. It aims to train the student to the basic concepts of the JAVA-programming language.

Signature of Teacher



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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mundhe A.S.

Department: Computer Science

Program: BSc SY Subject: Computer Science

Course Code: VII

Paper Title: Programming in C++

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	Unit I: Object Oriented Programming & C++	Object Oriented Programming Paradigm, Basic Concepts of OOP, Benefits of OOP, Object Oriented Languages, Applications of OOP, A Simple C++ Program, More C++ Statements, Structure of C++ program.	Introduction to Basic concepts of C++
II	Unit II: Basics of C++	Introduction, Tokens, Keywords, Identifiers & Constants, Basic Data Types, User-defined Data Types, Derived Data Types, Variables : declaration & dynamic initialization, Reference variables, Operators in C++ : Scope Resolution, Manipulators, Operator Precedence, Decision Control & Loop Control Structures: If, If-else, Nested If, Else-if ladder, switch, goto, Break statement, while, do-while, for.	To develop logics Which will help them to create programs, applications in C++

III	Unit III: Functions in C++	Introduction, Function Prototyping, Call by Value & Call by reference, inline function, default arguments, Function Overloading, Library Functions	Introduce to more advanced feature of C++
IV	Unit IV: Classes & Constructors in C++	Introduction, Structures, Specifying a Class, Defining member functions, Memory allocation for objects, Static Data Members, Static Member Functions, Objects as Function arguments, Friend Functions. Introduction to Constructors, Parameterized Constructors, Copy Constructors, Multiple Constructors in a class, destructors.	Introduce to more advanced feature of C++ help them to create program
V	Unit V: Operator Overloading	Introduction, Defining Operator overloading, Overloading Unary Operators, Overloading binary operators, overloading binary operator using friend, Rules for overloading operators	To provide exposure to problem-solving through programming.
VI	Unit VI: Inheritance in C++	Introduction, defining derived classes, single inheritance, multilevel inheritance, multiple inheritance, hierarchical inheritance, hybrid inheritance, virtual base classes, Abstract classes.	Study the Advance feature of C++

Specify Course Outcome:

1. Course is designed to provide complete knowledge of C++ language to develop logics Which will help them to create programs, applications in C++.
2. Introduces the more advanced features of the C++ language.

Specify Program Outcome:

1. Study different operating system.
2. Analysis basic networking system.
3. The course aims to provide exposure to problem-solving through programming.
4. It aims to train the student to the basic concepts of the C++-programming language.
5. Build an understanding of the fundamental concepts of computer networking.
6. Familiarize the student with the basic taxonomy and terminology of the computer networking area.

7. Introduce the student to advanced networking concepts, preparing the student for entry Advanced courses in computer networking.
8. The course aims to provide exposure to problem-solving through programming.
9. It aims to train the student to the basic concepts of the JAVA-programming language.

Signature of Teacher



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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: More A. D.

Department: Computer Science

Program: BSc SY Subject: Computer Science

Course Code: VIII

Paper Title: Computer Network

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	Introduction to Network	Definition & Applications of Computer Network, Data Transmission Modes, Protocol Hierarchies, and Design issues for layers, Connection Oriented & Connectionless services. Service Primitives. Network Models – OSI/ISO Reference Model & TCP/IP Model,	Study basic structure of computer network.
II	Network Hardware	Network Topologies, Network Devices - NIC Cards, Hub, Switch, Bridges, Wireless access points, Router, Gateways, Modems, ISDN Terminal Adaptor, Repeaters, Types of Networks	Study different devices used in network.
III	Transmission Media	Magnetic Media, Twisted pair, Co-axial cable , fiber optics , radio transmission, Wireless Transmission, Bluetooth.	Study different cables in network.
IV	Telephone System	Structure of telephone system, Transmission & Switching, Trunks & Multiplexing, Type of Switching, Introduction to mobile telephone system.	Study telephone system.

V	Internetworking protocols	Network Protocols, Email Architecture, Web server, Browsers, Domain Name System, IP protocol, IP addresses, IPv6. Introduction to Wi-Fi & 4G technology.	Study protocols in network.
VI	Network Security & Cryptography	Introduction to Security & Cryptography, Security concepts- Computer Security, Network Security, information Security, Firewall, Working of Firewalls, Conventional Cryptography, Caesar's Cipher, public key cryptography.	Study different technique in security.

Specify Course Outcome:

1. Study network devices, structure of network.
2. Study security & protocols of operating system.

Specify Program Outcome:

1. Study different operating system.
2. Analysis basic networking system.
3. The course aims to provide exposure to problem-solving through programming.
4. It aims to train the student to the basic concepts of the C++-programming language.
5. Build an understanding of the fundamental concepts of computer networking.
6. Familiarize the student with the basic taxonomy and terminology of the computer networking area.
7. Introduce the student to advanced networking concepts, preparing the student for entry Advanced courses in computer networking.
8. The course aims to provide exposure to problem-solving through programming.
9. It aims to train the student to the basic concepts of the JAVA-programming language.

Signature of Teacher



Dnyanopasak Shikshan Mandal's
College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mundhe A. S.

Department: Computer Science

Program: BSc SY Subject: Computer Science

Course Code: IX

Paper Title: Programming in JAVA

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	Java Evolution.	Java History, Java Features, How java differs From C and C++, Java and Internet. Java & WWW, Web Browsers, Java support systems, Java Environment	Learn the history of JAVA
II	Overview of Java	Introduction, simple java program, More JAVA Statements, An application with two classes, Java program structure, implementation of a java program, JAVA Virtual Machine, Command Line Arguments Java Tokens , Constants, Variables, Data Types, Declaration of variable, Giving Values to variables, Scope of Variables, Symbolic Constants, Type Casting, Getting Values of variables, Standard Default values, Java Statements	Study the JAVA program structure and implementation of JAVA program
III	Classes, Object and Methods	Introduction, Defining a class, Adding variables, Adding Methods, Creating Objects, Accessing Class Members, Constructors. Method	Study the class and methods of JAVA

		Overloading, Static Members, Nesting of Method, Inheritance: Extending a class, Overriding Method, Final variable and Methods.	
IV	Interfaces - Multiple Inheritances	Introduction, Defining Interface, Extending Interface, Implementing Interface, Accessing Interface Variables	Study interface and implement it in JAVA
V	Arrays and Strings	Introduction, One-dimensional Arrays, Creating an one dimensional array, Two dimensional Arrays, Creating an two dimensional array, String Arrays, String Method	Study the the Array and string of JAVA
VI	Packages and Applets	Introduction, Java API package, Using system packages, Naming Conventions, Creating Packages, Accessing a package, Using a Package, Adding a class to a package. Introduction, how applets differ from applications, preparing to write applets, building applet code, applet life cycle	Study the JAVA package and Applets

Specify Course Outcome:

1. Course is designed to provide Basic knowledge of *JAVA language* to develop logics Which will help them to create programs, applications in JAVA.
2. Introduces the more advanced features of the *JAVA* language.

Specify Program Outcome:

1. Study different operating system.
2. Analysis basic networking system.
3. The course aims to provide exposure to problem-solving through programming.
4. It aims to train the student to the basic concepts of the C++-programming language.
5. Build an understanding of the fundamental concepts of computer networking.
6. Familiarize the student with the basic taxonomy and terminology of the computer networking area.
7. Introduce the student to advanced networking concepts, preparing the student for entry Advanced courses in computer networking.
8. The course aims to provide exposure to problem-solving through programming.
9. It aims to train the student to the basic concepts of the JAVA-programming language.

Signature of Teacher



Dnyanopasak Shikshan Mandal's
College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mundhe A. S.

Department: Computer science

Program: BSc SY

Subject: Computer Science

Course Code: X

Paper Title: Laboratory Course Work (LCW)-II (OS and C++)

Unit Number	Topics	Unit-wise Outcome
1	Simple C++ Programs	Design Algorithm and Flowchart
2	Program in C++ using decision control structures	
3	Program in C++ using looping statements	
4	Program in C++ using Switch Statement	
5	Program in C++ using functions	
6	Program in C++ using a function with default arguments	
7	Program in C++ using a class and member function defined outside the class	
8	Program in C++ using Multiple Constructors in a class	
9	Program in C++ using Object as function arguments	
10	Program in C++ using Operator overloading	

11	Program in C++ to Overload Unary Minus (-) Operator	
12	Program in C++ to demonstrate Different types of Inheritance	
13	Program in C++ to demonstrate Multiple Inheritance	
14	Program in C++ to demonstrate Single Inheritance	
15	Program in C++ using Static Data Members	
16	Program in C++ to Demonstrate Use of File	
17	Introduction to Linux	
18	Linux Installation;	Study installation of Linux
19	Simple Linux Commands:	Execute Linux command
20	Communication Commands:	Execute Linux commands
21	Administration Commands:	Execute Linux commands
22	Shell Scripting;	Study shell script
23	Shell Programs.	Execute shell program

Specify Course Outcome:

Specify Program Outcome:

1. Study different operating system.
2. Analysis basic networking system.
3. The course aims to provide exposure to problem-solving through programming.
4. It aims to train the student to the basic concepts of the C++-programming language.
5. Build an understanding of the fundamental concepts of computer networking.
6. Familiarize the student with the basic taxonomy and terminology of the computer networking area.
7. Introduce the student to advanced networking concepts, preparing the student for entry Advanced courses in computer networking.

8. The course aims to provide exposure to problem-solving through programming.
9. It aims to train the student to the basic concepts of the JAVA-programming language.

Signature of Teacher



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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: More A. D.

Department: Computer Science

Program: BSc SY Subject: Computer Science

Course Code: XI (A)

Paper Title: - Skill Enhancement Course-I (Programming in SCILAB-I (Beginner))

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	Why Scilab	Capabilities of Scilab package, benefits of shifting to scilab.	Analysis need of SCILAB
II	Installing	Show where to download from and how to decide which version to choose (OS and 32/64bit) (www.scilab.org/download) Windows installation (Internet Connection is necessary) Linux installation (using package manager- show only Debian/Ubuntu as example (sudo aptget install scilab) as well as generic binary.	Installation of SCILAB.
III	Getting Started	Expressions: Show mathematical expressions with numbers, Variables, Diary command, Define symbolic constants, Basic functions, suppressing output(;), help, clc	Study mathematical expression in SCILAB.
IV	Vector Operations	Define vector, Calculate length of a vector, Perform mathematical operations on Vectors such as addition, subtraction and multiplication, Define a matrix, Calculate size of a matrix, Perform mathematical operations on Matrices such as addition, subtraction and multiplication.	Study Vector expression in SCILAB.

V	Matrix Operations	Access the elements of Matrix, Determine the determinant, inverse and Eigen values of a Matrix, Define special matrices, Perform elementary row operations, Solve the system of linear equations.	Study Matrix operation in SCILAB.
VI	Conditional Branching	IF and 'then' with the example, use of the 'else' keyword, use of the 'elseif' keyword, example for select.	Study conditional branching in SCILAB.

Specify Course Outcome:

Specify Program Outcome:

1. Study different operating system.
2. Analysis basic networking system.
3. The course aims to provide exposure to problem-solving through programming.
4. It aims to train the student to the basic concepts of the C++-programming language.
5. Build an understanding of the fundamental concepts of computer networking.
6. Familiarize the student with the basic taxonomy and terminology of the computer networking area.
7. Introduce the student to advanced networking concepts, preparing the student for entry Advanced courses in computer networking.
8. The course aims to provide exposure to problem-solving through programming.
9. It aims to train the student to the basic concepts of the JAVA-programming language.

Signature of Teacher



Dnyanopasak Shikshan Mandal's

College of Arts, Commerce and Science, Parbhani

Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mundhe A. S.

Department: Computer Science

Program: BSc SY Subject: Computer Science

Course Code: XII

**Paper Title: Laboratory Course Work (LCW)-III
(CN & Java)**

Unit Number	Unit Name	Topics	Unit-wise Outcome
1	Network Setup		Study the setup of network
2	Configuring IP Addresses		Study the configuration of IP Address
3	Simple JAVA Programs		Design Algorithm and Flowchart
4	JAVA Programs using control structures		
5	Program in JAVA using Two classes		
6	Program in JAVA to demonstrate Command Line Arguments		
7	Program in JAVA to demonstrate Method Overloading		

8	Program in JAVA using Inheritance		
9	Program in JAVA to Demonstrate Method Overriding		
10	Program in JAVA using Interface		
11	Program in JAVA using an Array		
12	Program in JAVA to demonstrate String Methods		
13	Program in JAVA using user Package		
14	Program in JAVA using system package		
15	Program in JAVA using constructors		
16	Program in JAVA using Nesting of Methods		

Specify Course Outcome:

Specify Program Outcome:

1. Study different operating system.
2. Analysis basic networking system.
3. The course aims to provide exposure to problem-solving through programming.
4. It aims to train the student to the basic concepts of the C++-programming language.
5. Build an understanding of the fundamental concepts of computer networking.
6. Familiarize the student with the basic taxonomy and terminology of the computer networking area.
7. Introduce the student to advanced networking concepts, preparing the student for entry Advanced courses in computer networking.
8. The course aims to provide exposure to problem-solving through programming.
9. It aims to train the student to the basic concepts of the JAVA-programming language.

Signature of Teacher



Dnyanopasak Shikshan Mandal's
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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: More A. D.

Department: Computer Science

Program: BSc SY Subject: Computer Science

Course Code: XIII (B)

Paper Title: Skill Enhancement Course-II (Digital Media)

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	Presentation Softwares	Introduction to power point , Creating Presentation with power point, Introduction to Flash , Creating Presentation with flash.	Study different presentation softwares.
II	Blogging	Fundaments of blog, Common examples of Blog, Create a blog with multimedia Content.	Create blog.
III	Digital photography	Basics of Digital photography, Camera and shooting, Digital image editing, Digital image management.	Use of digital camera.
IV	Podcast	Fundaments of Podcast, Audio recording and editing , Publishing and hosting Podcast.	Study podcast.
V	Promoting the Blogs	Social Media tools, Writing content for the web, Search engine optimization.	Promote blog.
VI	Copyrights	Towards Fair-use; Public domain; Digital commons, copyright in India- A Overview.	Study of copyrights.

Specify Course Outcome:

The course is designed to build practical skills in the creation and publication of digital technologies. The classes focus on workshops where students learn and apply these skills.

Specify Program Outcome:

1. Study different operating system.
2. Analysis basic networking system.
3. The course aims to provide exposure to problem-solving through programming.
4. It aims to train the student to the basic concepts of the C++-programming language.
5. Build an understanding of the fundamental concepts of computer networking.
6. Familiarize the student with the basic taxonomy and terminology of the computer networking area.
7. Introduce the student to advanced networking concepts, preparing the student for entry Advanced courses in computer networking.
8. The course aims to provide exposure to problem-solving through programming.
9. It aims to train the student to the basic concepts of the JAVA-programming language.

Signature of Teacher



Dnyanopasak Shikshan Mandal's

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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mundhe A .S.

Department: Computer Science

Program: BSc TY Subject: Computer Science

Course Code: XII

Paper Title: Software Engineering

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	The Nature of Software & Software Engineering	The Nature of Software, The Changing Nature of Software, Defining the Discipline, Software engineering process, Software engineering practice, Software Myths	Prepare detailed plans and designs as per customer's demands, carry out testing, develop intuitive user interfaces, and integrate all these activities into a system.
II	Software Process Structure & Models	A Generic process model, defining a framework activity, Process patterns, Process assessment & improvement, Prescriptive process models, Personal & team process models	Understand Software Engineering Process.
III	Agility development & Human Aspects	Introduction to Agility, Agility & Cost of Change, Agility principles, Extreme Programming, Characteristics of Software engineer, Psychology of Software engineering, Software team Structures.	Understand software design and software testing fundamentals
IV	Understanding Requirements & Design Concepts	Requirement Engineering ,Building the analysis model, Requirement Analysis, Design within the context of software engineering, The design	Understand Requirements and components of Software Engineering

		process, Design model, Software Architecture, Element of quality assurance, Software testing fundamentals	
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Specify Course Outcome:

Confidence of becoming a Software developer in order to get placement as well as
In research activities and Knowledge of Software.

Software engineering is art of software designing. It aims to prepare detailed plans and
Designs as per customer's demands, carry out testing, develop intuitive user interfaces, and
integrate all these activities into a system.

Specify Program Outcome:

- Understand Requirements and components of Software Engineering.
- Confidence of becoming a Software developer in order to get placement as well as in research activities.
- Give hands on training to the students and make them acquainted with various Real Time Applications implemented currently in the Industry.
- The objective of this course is to provide students with a basic understanding of multimedia Systems.
- With such background equipment, students would be able to evaluate more advanced or future multimedia systems.
- Confidence of becoming a Software developer in order to get placement as well as in research activities.
- Give hands on training to the students and make them acquainted with various Real Time Applications implemented currently in the Industry.
- E-commerce is a new revolution in the traditional market place where people buy from Internet.
- Online purchase from Amazon, Snap deal, Flipchart, etc. comes under e-commerce.
- Confidence of becoming a Software developer in order to get placement as well as in research activities.
- Give hands on training to the students and make them acquainted with various Real time Applications implemented currently in the Industry.
- Office automation refers to the integration of office functions usually related to Managing Information.



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College of Arts, Commerce and Science, Parbhani

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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: More A. D.
Science

Department: Computer

Program: BSc TY Subject: Computer Science

Course Code: XIII [A]

Paper Title: Visual Programming

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	Getting Started with VB	The IDE, The Elements of user interface, Designing user interface, Programming an Application Visual Development and Event Driven Programming.	Study basic parts of IDE.
II	Visual Basic The language	Variable, Constants, operators, data types, arrays, collections, Procedures, control flow & loop statements.	Study VB language.
III	Working with forms	Form types, Appearance of forms, Form properties, Designing menu structure, Building dynamic forms at run time, Introduction to MDI forms.	Study forms.
IV	Basic Active X controls	Command button, control-properties, Text Box control-properties, List Box & Combo Box control - properties, combo Box control-properties, Scroll Bar control-properties, Slider control properties, Understanding Visual data manager.	Study controls of VB.

Specify Course Outcome:

1. To learn Graphical User Interface Language.

2. To develop an application using GUI Language.
3. Implement VB programs to solve simple problems

Specify Program Outcome:

- Understand Requirements and components of Software Engineering.
- Confidence of becoming a Software developer in order to get placement as well as in research activities.
- Give hands on training to the students and make them acquainted with various Real Time Applications implemented currently in the Industry.
- The objective of this course is to provide students with a basic understanding of multimedia Systems.
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Signature of Teacher



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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mundhe A. S.

Department: Computer Science

Program: BSc TY Subject: Computer Science

Course Code: III

Paper Title: Skill Enhancement Course-III (SECCS-III)

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	Introduction to multimedia	Introduction to multimedia, elements of multimedia, multimedia and hypermedia, characteristics of multimedia, hardware and software requirement, uses of multimedia, WWW, multimedia Software tools.	Study text, graphics, sound, hardware software of Multimedia
II	Text	Text: Introduction, types of text, Unicode standard, insertion of text, text compression, text file Formats, image file format (bmp, jpg, png).	Study text and File format
III	Introduction to graphics	Introduction to graphics, advantages and uses of graphics, Audio-introduction, Components of Audio system, digital audio processing, and Audio file formats.	Study and graphics and Audio file formats
IV	Video-introduction	Video-introduction, Motion Video, Analog Video Camera, Digital Video, Processing, Storage formats, video file format.	Study the Analog video and Digital video

Specify Course Outcome:

1 Develop projects effectively and independently, apply specialized knowledge in selected area(s) of Computer Science.

Specify Program Outcome:

- Understand Requirements and components of Software Engineering.
- Confidence of becoming a Software developer in order to get placement as well as in research activities.
- Give hands on training to the students and make them acquainted with various Real Time Applications implemented currently in the Industry.
- The objective of this course is to provide students with a basic understanding of multimedia Systems.
- With such background equipment, students would be able to evaluate more advanced or future multimedia systems.
- Confidence of becoming a Software developer in order to get placement as well as in research activities.
- Give hands on training to the students and make them acquainted with various Real Time Applications implemented currently in the Industry.
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- Online purchase from Amazon, Snap deal, Flipchart, etc. comes under e-commerce.
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- Give hands on training to the students and make them acquainted with various Real time Applications implemented currently in the Industry.
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Signature of Teacher



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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: More A. D.

Department: Computer Science

Program: BSc TY Subject: Computer Science

Course Code: XIV

Paper Title: Relational Database Management Systems & PL/SQL

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	Introduction	Introduction to DBMS, Applications of DBMS, Data Models, Database Architecture, Database Users & Administrators, Entity, Attributes & Entity Set, Database Languages, DDL,DML,DCL.	Study basic parts of DBMS.
II	Relational Algebra and Calculus	Introduction to Selection, Projection, Union, and Joins, introduction to SQL, Basic SQL Query and Examples of SQL Queries: select, where, from, Introduction to views, Aggregate Operators Group by & Order by Clause.	Study queries of SQL.
II	Integrity Constraints	Introduction, Domain Constraint, Primary Key, Unique Key, Foreign Key.	Study keys.
IV	Introduction to PL/SQL	Introduction, Architecture of PL/SQL, Data types, operators, Decision making and looping statements, Simple PL/SQL programs, Introduction to Triggers.	Study of PL/SQL

Specify Course Outcome:

1. To learn Relational Database Management system and database languages.
2. To learn Relational Algebra and Calculus.
3. To study Integrity Constraints and PL/SQL
4. To develop an application using PL/SQL.

Specify Program Outcome:

- Understand Requirements and components of Software Engineering.

- Confidence of becoming a Software developer in order to get placement as well as in research activities.
- Give hands on training to the students and make them acquainted with various Real Time Applications implemented currently in the Industry.
- The objective of this course is to provide students with a basic understanding of multimedia Systems.
- With such background equipment, students would be able to evaluate more advanced or future multimedia systems.
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- Give hands on training to the students and make them acquainted with various Real time Applications implemented currently in the Industry.
- Office automation refers to the integration of office functions usually related to Managing Information.

Signature of Teacher



Dnyanopasak Shikshan Mandal's
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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mundhe A.S.

Department: Computer Science

Program: BSc TY Subject: Computer Science

Course Code: XVII

Paper Title: Laboratory Course Work-Project Work

Unit Number	Unit Name	Topics	Unit-wise Outcome
			Develop projects effectively and independently, apply specialized knowledge in selected area(s) of Computer Science.

Specify Course Outcome:

Give hands on training to the students and make them acquainted with various Real time Applications implemented currently in the Industry.

Specify Program Outcome:

- Understand Requirements and components of Software Engineering.

- Confidence of becoming a Software developer in order to get placement as well as in research activities.
- Give hands on training to the students and make them acquainted with various Real Time Applications implemented currently in the Industry.
- The objective of this course is to provide students with a basic understanding of multimedia Systems.
- With such background equipment, students would be able to evaluate more advanced or future multimedia systems.
- Confidence of becoming a Software developer in order to get placement as well as in research activities.
- Give hands on training to the students and make them acquainted with various Real Time Applications implemented currently in the Industry.
- E-commerce is a new revolution in the traditional market place where people buy from Internet.
- Online purchase from Amazon, Snap deal, Flipchart, etc. comes under e-commerce.
- Confidence of becoming a Software developer in order to get placement as well as in research activities.
- Give hands on training to the students and make them acquainted with various Real time Applications implemented currently in the Industry.
- Office automation refers to the integration of office functions usually related to Managing Information.

Signature of Teacher



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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mundhe A.S.

Department: Computer Science

Program: BSc TY Subject: Computer Science

Course Code: XV [B]

Paper Title: E-Commerce

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	Electronic Commerce	Introduction, E-Commerce types, Value Added Networks, Electronic commerce over the Internet.	Study the types of E-commerce
II	Intranet	Introduction to Intranet, Intranet services, Intranet implementation	Study the intranet
III	Internet	Internet-Introduction, Internet Engineering Task Force, Internet Architecture Board, Internet Communication Protocols, Internet Search Tools: Telnet, FTP, World Wide Web. Gopher, HTTP, Concerns about Internet.	Study the IAB and protocols
IV	Electronic Data Interchange	EDI introduction, Cost & Benefits of EDI, Components of EDI Systems: EDI Standards, EDI Software's, EDI Communication Networks, EAN system, EAN/COM, Article numbering system, Bar-coding, Serial Shipping Container Code & EAN label.	Study the EDI components and EDI communication

Specify Course Outcome:

- To learn Electronic Commerce market place and Internet.
- Understand Electronic Data Interchange.

Specify Program Outcome:

- Understand Requirements and components of Software Engineering.
- Confidence of becoming a Software developer in order to get placement as well as in research activities.
- Give hands on training to the students and make them acquainted with various Real Time Applications implemented currently in the Industry.
- The objective of this course is to provide students with a basic understanding of multimedia Systems.
- With such background equipment, students would be able to evaluate more advanced or future multimedia systems.
- Confidence of becoming a Software developer in order to get placement as well as in research activities.
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Signature of Teacher



Dnyanopasak Shikshan Mandal's
College of Arts, Commerce and Science, Parbhani

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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: More A. D.

Department: Computer Science

Program: BSc TY Subject: Computer Science

Course Code: XVI

Paper Title: Laboratory Course Work-IV

Unit Number	Topics	Unit-wise Outcome
1	Write a program in VB for arithmetic operation.	Study properties of controls of vb & implement it.
2	Write a program in VB for Check Box.	
3	Write a program in VB for Option Button.	
4	Write a program in VB for Combo Box.	
5	Write a program in VB for Picture Box.	
6	Write a program in VB for System security.	
7	Write a program in VB for System Box.	
8	Write a program in VB for Scroll Bar.	

9	Write a program in VB for Database.	
10	Write a program in VB for Menu Editor.	
11	Create a table in SQL.	Study syntax of query & execute it.
12	Filtering Table Data.	
13	Operation on Table.	
14	Operation on Table.	
15	Computation on Table.	
16	Pattern matching.	
17	Oracle Table Dual.	
18	Oracle functions.	
19	Joining table.	
20	Union, Intersection, minus	

Specify Course Outcome:

1. To learn Graphical User Interface Language.
2. To develop an application using GUI Language.
3. Implement VB programs to solve simple problems
- 4 To learn Relational Database Management system and database languages.
- 5 To learn Relational Algebra and Calculus.
- 6 To study Integrity Constraints and PL/SQL
- 7 To develop an application using PL/SQL.

Specify Program Outcome:

- Understand Requirements and components of Software Engineering.
- Confidence of becoming a Software developer in order to get placement as well as in research activities.
- Give hands on training to the students and make them acquainted with various Real Time Applications implemented currently in the Industry.
- The objective of this course is to provide students with a basic understanding of multimedia Systems.
- With such background equipment, students would be able to evaluate more advanced or future multimedia systems.
- Confidence of becoming a Software developer in order to get placement as well as in research activities.

- Give hands on training to the students and make them acquainted with various Real Time Applications implemented currently in the Industry.
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Signature of Teacher



Dnyanopasak Shikshan Mandal's
College of Arts, Commerce and Science, Parbhani

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Pro-forma for program and course outcomes (2.6.1)

Name of Teacher: Mundhe A.S.
Science

Department: Computer

Program: BSc TY

Subject: Computer Science

Course Code: IV

Paper Title: Skill Enhancement Course-IV
Office Automation Tools

Unit Number	Unit Name	Topics	Unit-wise Outcome
I	Introduction to MS Office	Introduction to MS Office, Characteristics of office automation system, Goals of office automation.	Study the goals of office automation
II	Introduction to MS Word	Introduction to MS Word, Opening screen of word, Creating document, Typing text, Formatting Text, Editing text, Line Spacing, Borders and shading, Inserting headers and footers, Creating tables, inserting graphics, Drawing objects.	Study formatting in word
III	Introduction to MS Excel	MS Excel, Opening screen of Excel, Functions in excel, Creating worksheets, Printing Worksheets, Creating and printing charts.	perform accounting operations in Excel
IV	Introduction to PowerPoint	PowerPoint Basic Terminology, Creating presentations, Auto content wizard, Using blank presentation option, Using design template option,	perform presentation skills in power Point

		Adding slides, Deleting slides, Importing images, drawing in PowerPoint, numbering a slide, saving presentation, printing presentation	
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Specify Course Outcome:

1 Awareness of existing demanding trends in IT industry in order to get placement As well as in research.

2 Seek Jobs in emerging BPO/IT Support Sector.

3 To familiarize the students in preparation of documents and presentations with office automation

Tools. Broadly, b learning the course, the students will be able to perform documentation, to Perform accounting operations and to perform presentation skills

Specify Program Outcome:

- Understand Requirements and components of Software Engineering.
- Confidence of becoming a Software developer in order to get placement as well as in research activities.
- Give hands on training to the students and make them acquainted with various Real Time Applications implemented currently in the Industry.
- The objective of this course is to provide students with a basic understanding of multimedia Systems.
- With such background equipment, students would be able to evaluate more advanced or future multimedia systems.
- Confidence of becoming a Software developer in order to get placement as well as in research activities.
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- Give hands on training to the students and make them acquainted with various Real time Applications implemented currently in the Industry.
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Signature of Teacher