



C. U. SHAH UNIVERSITY
Wadhwan City

FACULTY OF: - Computer Science

DEPARTMENT OF: - Master of Science (Information Technology)

SEMESTER: - II

CODE: - 5CS02OOP1

NAME: - Object Oriented Concept & C++ Programming (OOP)

Teaching and Evaluation Scheme:-

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)			Total
							Sessional Exam		University Exam		Internal		University	
							Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
5CS02OOP1	Object Oriented Concept & C++ Programming	4	-	-	4	4	30	1.5	70	3	-	-	-	100

Objectives:

- The C++ language most demanding language as a tool for all types of work. How this important language is to be mastered and how to use this knowledge in building efficient and flexible code is one of the prime requirements today.
- The course helps to the students to improve the object oriented programming skills.

Prerequisites:

- Any programming language like C
- Programming concepts including algorithm designing and logic.

Course Outline:

Sr.No	Course Contents	Hours
1	Introduction to Object Oriented Concepts Object Oriented Concepts, Object, Class, Keywords, Identifiers, Data types, Constants, Features of C++, Differentiate Object Oriented V/s Procedure Oriented	4
2	Overview of C++ Language Operators in C++, Conditional structure and looping structure, Differentiate struct v/s class, Differentiate union v/s class, Application of pointer in object oriented concepts, Pointer to objects and pointer to members of class, The local classes, Assigning objects	5
3	Functions Utility in object oriented Approach Function Introduction, The inline function, Default arguments to the function, Object as a parameter, Call by reference and return by reference, Function Prototyping, Function overloading, Friend Function, utility of friend function with examples, Constant and volatile	5



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	function, Static function, Private and public function, Function using pointer	
4	Application of Constructors & Destructors in Object oriented Concepts Constructor, Application of Constructor & Rule to define the constructor, Types of Constructor, Explicit constructor, Parameterized constructor, Multiple Constructor(With Example), Dynamic Initialization, Constructor with dynamic allocation, Copy constructor	4
5	Operator Overloading & User define function: Arithmetic operator overloading, Unary , Binary Operator Overloading, Assignment Operator Overloading, Subscript operator overloading, Operator overloading with Friend Function, The need for user defined conversion, Four different cases where user defined conversions are needed, Comparison of both the methods of conversion.	5
6	Templates Use of Templates, Define Function Templates, Function Templates with Generic & Non Generic Types, Define Class Templates, Specialization In templates, Define Class and Generic Data Types, Static Data Member in Templates, Export, typename Keyword	5
7	Inheritance Application of Inheritance, Defining derived class using single base class, Define Different Types of Derivation using Access modifiers, The implementation of inheritance in the C++ object model, The Access Control, Declaration, The multiple-inheritance, Abstract classes, Composite objects	3
8	Runtime Polymorphism: Difference Between Compile time and Run time polymorphism, Pointers to Objects, This pointer, Compatibility of Derived and base class pointers, The sub object concept, Virtual functions, Static invocation of virtual function, Default arguments to virtual functions, Virtual destructors, Pure virtual functions, RTTI.	4
9	Exception Handling Introduction, Exception Handling, Mechanism, Try, Catch and throw mechanism, Re throwing an exception , Terminate and Unexpected functions, Drawbacks of exception handling approach, The exception Class	3
10	IO Streams Stream, Difference of C and C++ IO Stream, The C++ Predefined streams, Formatting IO, IOS Members, Manipulators, Creating own manipulator	4
11	Using Files for IO Why IO is special, Different File Modes, File Handling, Create, Update, Delete, Files, Random Access using seek, IO Modes, Handling File Control Errors	4
12	Namespaces Introduction and need of name space, Defining namespaces, Extending the namespace	2
13	The Standard Template Library Introduction, Generic Programming Technique, Generic Software Designing technique, Components, Generic Algorithms, Iterators, Containers, Algorithms	2



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Learning Outcomes:

- After completion of the course students should become reasonably good at problem solving and algorithm development. They would become capable of solving problems using computers through C programming language.

Teaching & Learning Methodology:

- Using Whiteboard & Multimedia or OHP

Books Recommended:

Text Books:

1. Object Oriented programming with C++, **E. Balagurusamy**, TMH
2. Complete Reference C++ , **Herbert Schildt**, McGraw Hill Publications
3. Computer Science- A Structured approach using C++, **Forouzan Gilburg**, THOMSON Books
4. Object Oriented programming in C++, **Robert Lafore**, Pearson Education
5. C++ Primer, **Stanley Lippmann**, Pearson Education
6. The C++ Programming Language, **Bjarne Stroustrup**, Pearson Education
7. Effective C++, **Scott Mayer**, Addison Wesley
8. OOP with C++, **S .Sahay**, Oxford Higher Education.
9. C++ and OOP Paradigm, **D.Jana**, 2nd Edition, PHI.



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FACULTY OF:- Computer Science

DEPARTMENT OF:- Master of Science (Information Technology)

SEMESTER:- II

CODE:- 5CS02JPL1

NAME:- Java Programming (JPL)

Teaching and Evaluation Scheme:-

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme								
		Th	Tu	Pr	Total		Theory				Practical (Marks)				Total
							Sessional Exam		University Exam		Internal		University		
							Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr		
5CS02JPL1	Java Programming	4	-	-	4	4	30	1.5	70	3	-	-	-	100	

Objectives:

- To develop proficiency in creating console based and GUI based applications using the Java Programming Language.
- To be able to understand the concepts of Object Oriented Programming Language and easily use Java.
- To get a good understanding of developing multi-threaded applications using the Java Programming Language.
- To be able to develop Applets for embedding in a web page.

Prerequisites:

- Knowledge of Algorithm and Flow chart to implement the programming logic.

Course Outline:

Sr. No.	Course Contents	Hours
1	Introduction Introduction – what is java, importance of java, java implementation application of java, java buzzwords (simple, secure, portable, object-oriented, robust multithreaded, architecture – natural, interpreted, high performance, distributed dynamic) object oriented programming three OOP principals (encapsulation, inheritance, polymorph) sample Program & compilation, block of code, lexical issues (White space, identifiers, literals, comments, separators, keyword),	6
2	Data type, operators, control structures variables, constants, declaration, literals, scope of variable, type casting arithmetic operators,	4



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	relational operators, logical operators, assignment operators, increment –decrement operators, conditional operators, bit wise operators, dot operators, if-else, statement, loops (while, do-while, for break, go to, continue return) switch statement, operator arrays – declaration, creation, initialization, length ,two-dimensional arrays string-string arrays,	
3	Introduction of classes, objects and methods class, object & method, defining class, adding variables, adding methods, creating objects, constructors THIS key word, garbage collection, finalize() method ,accessing class members, method overloading, methods overloading static members, nesting of methods, vectors and wrapper classes, final variables and methods, final classes, finalize methods, abstract methods and classes, visibility control – public access, friendly access, protected access, private protected access, , object as parameters, argument passing, returning objects, recursion, access control, static, final, Nested & inner classes, string class , string buffer class, Command-Line arguments	10
4	Inheritance, Packages and Interfaces Inheritance, types of Inheritance, Member access, super class creating multilevel Hierarchy ,Method overloading & overriding, ,Defining packages, understanding CLASSPATH ,Access protection ,importing packages, defining interfaces	6
5	Managing Errors & Exceptions ,java.util Package exception types, uncaught exceptions ,multiple catch clauses ,nested try statements ,throw, throws, finally, java’s built-in exceptions, creating your own exception ,classes from java.util package(Date, Time Zone, Calendar)	8
6	I/O files in java, Multithreaded programming Concept of streams, difference between characterstreams and byte streams characterstreams(reader,writer,bufferedReader,inputstreamreader,fileReader, bufferWriter, outputStreamReader,fileWriter,PrintWriter)Bytestream(inputstream,fileinputstream,bufferedinputstream,datainputstream,fileoutputstream,dataoutputstream, printstream)Other classes (random access file , streamtokenizer)creating threads, run()method, new thread, thread class, stopping &blocking threads, life cycle of thread- newborn, runnable, running, blocked, dead, waiting sleeping, suspended, blocked, using thread methods, thread exceptions, thread priority, implementing the Runnable interface	6
7	Applet, Event Handling Introduction to applet, applet lifecycle ,applet class,applet context class, passing parameters to applet,use of java .awt graphics class and its various methods in an applet,Event delegation	4



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	model or event class hierarchy, all classes and interfaces of event delegation model, programmers related to event handling covering all types of events	
8	Graphical user interface Layout managers (flowlayout, borderlayout, cardlayout gridbaglayout, gridlayout) AWT controls (labels, buttons, checkboxes, checkboxgroup, choices, textfields, textareas, lists, panels, windows, frames, menus, menubars)	4

Learning Outcomes:

- Ability to create appropriate classes using the Java Programming Language to solve a problem using Object Oriented Approach.
- Ability to write console based and GUI based applications in the Java Programming Language.
- Ability to develop multi-threaded applications using the Java Programming Language
- Ability to create Applets using the Java Programming Language

Teaching & Learning Methodology:

- Using Whiteboard & Projector or OHP

Books Recommended:

Text Books:

1. Programming with Java a Primer 3e, **Balagurusamy**, McGraw Hill
2. Java: the Completed Reference , 7th Edition by Schildt, **Herbert**, TMH publication
3. The class of Java, **Pravin Jain**, Pearson Education.
4. The Java Programming Language, Ken Arnold, James Gosling, David Holmes , **Addison-** Wesley Pearson Education (4th Edition – 2005).
5. Object-Oriented Programming with Java: Essentials & Applications, **Raj Kumar Buyya, S. Thamarai Selvi, & Xing Chen Chu**, Tata McGraw Hill
6. Core Java, **Mahesh P. Matha**, PHI Learning Private Limited
7. Java Programming, **Hari Mohan Pandey**, Pearson Publication



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FACULTY OF:- Computer Science

DEPARTMENT OF:- Master of Science (Information Technology)

SEMESTER:- II

CODE:- 5CS02SET1

NAME:- Software Engineering (SE)

Teaching and Evaluation Scheme:-

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)			Total
							Sessional Exam		University Exam		Internal		University	
							Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
5CS02SET1	Software Engineering	4	-	-	4	4	30	1.5	70	3	-	-	-	100

Objectives:

- To be able to understand the concepts of Designing Software and Getting Cost Estimations

Prerequisites:

- Knowledge of Basic System Analysis and Design

Course outline:

Sr. No.	Course Contents	Hours
1	Introduction to Software Engineering, Process and Process Models Introduction to Software Engineering, Evolving Role of Software, Legacy Software. A Layered Technology, A Process Frame Work, The Process Pattern. Prescriptive Models, The Waterfall Model, The Serialized and Unified Process.	10
2	Requirements Engineering Problem Recognition, Requirement Engineering tasks, Processes, Requirements Specification, Use cases and Functional specification, Requirements validation, Requirements Analysis, Modeling – different types	10
3	Object Oriented Analysis and Design Object Oriented Analysis Concept, Domain Analysis, Generic Concept of Object Oriented Analysis Model, Object Oriented Analysis Process, Object Relationship Model, Object Behavior Model. Design of Object Oriented System, The System Design Process, Object Design and System Design Process	10



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4	Testing Strategies and Tactics A Strategic Approach to Software Testing (Verification and Validation) Strategic Issues, Validation Testing (Criteria, Configuration Review, alpha and beta Testing), The art of Debugging (Debugging Process, Strategies, Correcting the Error) , Software Testing Fundamentals, Black Box and White Box Testing, Object Oriented Testing Methods.	10
5	Clean Room Software Engineering and Component Base Software Engineering The Clean Room Approach, Functional specification, Clean room specification Clean room design, Clean room testing, Engineering of component based systems The component based software engineering process Domain engineering, Component based development Classifying and Retrieving Components	8

Learning Outcomes:

- He/She should be able to understand and appreciate the Web Technology.
- He/She should be aware of the working and architectural Web Site.
- He/She should be able to solve problems given to him/her using PHP efficiency.

Books Recommended:

Text Books:

1. Software Engineering – A practitioner’s Approach, **Roger Pressman**. 6th Edition.
2. Object Oriented Analysis and Design, **Gooch**
3. Fundamentals of Software Engineering, **Rajib Mall**.



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FACULTY OF:- Computer Science

DEPARTMENT OF:- Master of Science (Information Technology)

SEMESTER:- II

CODE:- 5CS02POS1

NAME:- Operating System (POS)

Teaching and Evaluation Scheme:-

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)			Total
							Sessional Exam		University Exam		Internal		University	
							Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
5CS02POS1	Principles of Operating System	4	-	-	4	4	30	1.5	70	3	-	-	-	100

Objectives :

- Help students become familiar with the fundamental concepts of operating system.
- Help students become competent in recognizing operating systems features and issues.
- Provide students with sufficient understanding of operating system design and how it impacts application systems design and performance.

Prerequisites:

- Basics of Computer System Architecture.
- C / C++ Programming Skills.

Course Outline:

Sr. No	Course Contents	Hours
1	Computer and Operating System Overview. Computer system organization and Architecture, Evolution of operating system, Operating system structure and operations overview of Process, Memory, I/O , Storage	06
2	Processes Process states, PCB(Process Control Block),Operation on process, Process Scheduling, IPC (Inter Process Communication),Examples of IPC System ,Thread Overview, Multithreading model	08
3	Concurrency Control: Principles of concurrency ,Mutual Exclusion, Semaphore, Monitors, Message Passing, Reader/Writer problem, Deadlock characterization, Method for handling deadlock, Deadlock prevention, Deadlock avoidance/Detection, Dining philosophers problem	08



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4	Memory Management Memory Partitioning ,Swapping, Continuous Memory allocation, Paging, Segmentation, Virtual memory management System: Demand paging, copy on write, Page Replacement	08
5	Scheduling Types of Scheduling, Scheduling Algorithm , Unix scheduling Multiprocessor Scheduling Linux Scheduling	07
6	I/O Management and Disk Scheduling I/O Devices, Organization of the I/O Function, OS Design Issues, I/O Buffering, Disk Scheduling, RAID Structure, Disk cache, UNIX I/O.	06
7	File Management Overview, Access Methods, Directory structure, File System Mounting File Sharing, Protection	05

Learning Outcomes:

- He/She should be able to understand the concepts of Operating System.
- He/She should be aware of operating system failure of know error.
- He/She should be able to solve problems of application errors due to Operation of function and define base architecture in terms of OS fundamentals.

Teaching & Learning Methodology:

- Using Whiteboard & Multimedia or OHP

Books Recommended:

Text Books :

1. Operating System Principles, **A. Silberschats, Peter Galvin, Greg Gagne**, WILEY-India 7th Edition.
2. Operating Systems, **William Stallings**, Pearson 6th Edition.
3. Operating Systems, **Achyut Godbole**, Tata McGraw- Hill.
4. Unix Systems Programming : Communication, Concurrency and Threads, **Kay Robbins**, 2-Edition, Pearson Education
5. Unix concepts and applications, **Sumitabha Das**, TMH Publications.
6. Unix programming, **Stevens**, Pearson Education.



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FACULTY OF:- Computer Science
DEPARTMENT OF:- Master of Science (Information Technology)
SEMESTER:- II
CODE:- 5CS02WTD1
NAME:- Web Technology (WTD)

Teaching and Evaluation Scheme:-

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)			Total
							Sessional Exam		University Exam		Internal		University	
		Marks	Hrs	Marks	Hrs		Pr/Viva	TW	Pr					
5CS02WTD1	Web Technology	4	-	2	6	5	30	1.5	70	3	50	-	-	150

Objectives:

- The internet has drastically changed the way we communicate. As web technology dissolves the world’s borders, a new “global community” has emerged.
- The course will focus on methods of using interconnected networks to effectively distribute text and information.
- The course will focus on overall site design strategies, explore web usability/interface problems, and outline effective solutions.
- Students will learn and implement HTML to construct a website with consideration to course topics.
- We seek an advanced mastery of web-development techniques that use databases to create content—HTML form objects, database connections, and server-side programming. We will use open-source MySQL as our database, structured query language (SQL), and PHP for programming

Prerequisites:

- The course is for advanced students with career or program-related needs for Web applications training.
- Students should be familiar with Windows operating systems and with technology for static web pages.

Course Outline:

Sr. No.	Course Contents	Hours
1	Introduction to JavaScript Introduction to JavaScript, Features, Writing Methods in HTML, Data Types, Variable Creations, Array, Operators, Conditional Checking, Looping Structures, UDF, Dialog Boxes, Built-In Objects (String, Math, Date), Cookies.	8



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2	Introduction to PHP Introduction to PHP, Features, Installation of IIS, Variable Declaration (Static, Global), Operators and Expressions, Decision Making, Looping Structures, Arrays, UDF (argument function, default function, return function), Variable Functions (Gettype, settype, intval, print_r, strval, floatval, isset, unset)String Functions, Math Functions, Date Functions, Array Functions, Miscellaneous Functions, File Handling Functions.	8
3	Component of PHP PHP Regular Expression, Cookies, Session, GD Library	5
4	XML with PHP Introduction to XML, XML Document Structure, Creating XML File, Root and Child Node concept, XML Elements and Attributes, The SimpleXML Extension.	5
5	Database Programming Introduction to MySQL (Using PHP MyAdmin), PHP MySQL Connectivity, Basic Connection Functions, Handling Server Errors, Creating Database, Tables, Insert Data into Tables, Retrieving data from MySQL, Retrieving Fields	6
6	Object Oriented Programming Introduction to OOP, Classes, Objects, Inheritance, Constructor, Serialized Object, Overloading, Encapsulation	8
7	AJAX with PHP Introduction to AJAX, Server Side Scripting Technology, Request and Response Concept, Creating Web Page with AJAX, AJAX with Database	8

Learning Outcomes:

- Write server-side scripts in the PHP language that process data from online forms and access MySQL databases to create dynamic Web pages.
- Design and create 3-tier Web applications using PHP and MySQL.

Teaching & Learning Methodology:

- Using Whiteboard & Multimedia or OHP

Books Recommended:

Text Books :

1. Html, Dhtml, Javascript, Perl Cgi, **Ivan Byros**, Bpb Publication
2. PHP and MySQL Web Development—Fourth Edition, **Luke Welling and Laura Thomson**. Addison-Wesley.
3. Programming with Java, **Bhave**, Pearson Education
4. PHP for the Web: Visual QuickStart Guide, **Ullman**, Pearson Education
5. Java for programmers, **Deitel**, Pearson Education.



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FACULTY OF:- Computer Science

DEPARTMENT OF:- Master of Science (Information Technology)

SEMESTER:- II

CODE:- 5CS02OOP2

NAME:- Practical Experiments-III (OOP)

Teaching and Evaluation Scheme:-

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)			Total
							Sessional Exam		University Exam		Internal		University	
							Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
5CS02OOP2	Practical Experiments -III(OOP)	-	-	4	4	2	-	-	-	-	20	-	80	100

Sr. No	Course Contents	Number of Hours
1.	Write a C++ program to find the sum of individual digits of a positive integer.	2
2.	A Fibonacci sequence is defined as follows: the first and second terms in the sequence are 0 and Subsequent terms are found by adding the preceding two terms in the sequence. Write a C++ program to generate the first n terms of the sequence.	4
3.	Write a C++ program to generate all the prime numbers between 1 and n ,where n is a value supplied by the user.	6
4.	Write C++ programs that use both recursive and non-recursive functions a. To find the factorial of a given integer. b. To find the GCD of two given integers. c. To find the nth Fibonacci number.	8
5.	Write a C++ program that uses functions a. To swap two integers. b. To swap two characters. c. To swap two real. Note: Use overloaded functions.	10
6.	Write a C++ program to find both the largest and smallest number in a list of integers.	12
7.	Write a C++ program to sort a list of numbers in ascending order.	14
8.	Write a C++ program that uses function templates	16
9.	Write a C++ program to sort a list of names in ascending order.	18



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10.	Write a C++ program to implement the matrix using a class. a) Reading a matrix. c) Addition of matrices. b) Printing a matrix. d) Subtraction of matrices. e) Multiplication of matrices.	20
11.	Write a C++ program that overloads the + operator and relational operators (suitable) to perform the following operations: a) Concatenation of two strings. B) Comparison of two strings.	22
12.	Write a template based C++ program that determines if a particular value occurs in an array of values.	24
13.	Write a C++ program that uses a function to reverse the given character string in place without any duplication of characters.	26
14.	Write a C++ program to make the frequency count of letters in a given text.	28
15.	Write a C++ program to count the lines, words and characters in a given text.	30
16.	Write a C++ program to determine if the given string is a palindrome or not.	32
17.	Write a C++ program to make frequency count of words in a given text.	34
18.	Write a C++ program to generate Pascal's triangle.	36
19.	Write a C++ program to construct of pyramid of numbers.	38
20.	Write a C++ program to display the contents of a text file.	40
21.	Write a C++ program which copies one file to another.	42
22.	Write a C++ program to that counts the characters, lines and words in the text file.	44
23.	Write C++ programs that illustrate how the following forms of inheritance are supported: a) Single inheritance b) Multiple inheritance c) Multi level inheritance d) Hierarchical inheritance	46
24.	Write a C++ program that illustrates the order of execution of constructors and destructors when new class is derived from more than one base class.	48



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FACULTY OF:- Computer Science

DEPARTMENT OF:- Master of Science (Information Technology)

SEMESTER:- II

CODE:- 5CS02JPL2

NAME:- Practical Experiments-IV (JAVA)

Teaching and Evaluation Scheme:-

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)			Total
							Sessional Exam		University Exam		Internal		University	
							Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
5CS02JPL2	Practical Experiments -IV (JAVA)	-	-	4	4	2	-	-	-	-	20	-	80	100

SNo.	Practical's List
1.	Write program for simple print "Wel come" in screen
	Write program for find Odd and Even number
	Program- Write a java program to calculate Factorial of given no through command line argument
2.	Write a java program to calculate area of circle ,use command line argument to accept the value of radius
	Program that accepts two Double numbers as its command line argument Multiply these together and display the Product.
3.	Program that defines a circle class with two constructors. The first from accepts a double value that represents the radius of circle. This constructor assumes that the circle is centered at the origin. The second form accepts the double value & the first two arguments define the co-ordinate of the center and the third arguments define the radius.
	program to sort the element of an array in ascending order using command line argument
4.	Write Program to find out Prime number using Command line argument with n number
	/* Display the following outputs 1 1 2 2 1 2 3 3 3 1 2 3 4 4 4 4 1 2 3 4
5.	Write a java program to find power of given number use command line argument to accept base and power number
	Write a program for print the series like 1 + 1/2 + 1/3....
	Write a program for print the Fibonacci series
6.	Program to create a STRINGBUFFER object and illustrate how to insert character as its beginning
	Program to create an application which will read string from command line argument and will return into



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	<p>alphabetical order. EX. string:- AMPICS O/P:- ACIMPS</p>
7.	<p>Write a java program to find out prime numbers with command line argument Program that searches through its command line argument if arguments found that does not begin with an Upper case letter. Display an error message and terminate</p>
8.	<p>Create package with sum of three class Create multiple threads. Program to print words, lines, caharacters in a file</p>
9.	<p>Program to print information about a file. Write a java program to read a text and count the occurrences of word</p>
10	<p>Program for Applet Life Cycle with appropriate Message Design Indian Flag. Programs create an applet which has two buttons red and green. create a event when red button is pressed the background of the applet will be red and also green respectively</p>
11.	<p>Program to create a circle on the center of the applet and fill color with magenta</p>
12	<p>Write a Applet program to show NAME and PASSWORD label and textbox resp. to enter text in it. Write an applet that accepts multiple parameters that identifying a set of images select one of these images at random and display it</p>
13	<p>Write a Java program that allows the user to draw lines, rectangles and Ovals.</p>
14.	<p>Write a java Applet to display nested layout Write a java applet program of scrolling list with choice & inform user to its select it</p>
15.	<p>Program To Create a File Menu</p>
16.	<p>Demonstrate the mouse event handlers.</p>
17.	<p>Write a Java program that works as a simple calculator. Use a grid layout to arrange buttons for the digits and for the + - X % operations. Add a text field to display the result.</p>
18.	<p>Write an applet that computes the payment of a loan based on the amount of the loan, the interest rate and the number of months. It takes one parameter from the browser: Monthly rate; if true, the interest rate is per month; Other wise the interest rate is annual.</p>



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FACULTY OF:- Computer Science

DEPARTMENT OF:- Master of Science (Information Technology)

SEMESTER:- II

CODE:- 5CS02MOT2

NAME:- Lesson From Motivational Books

Teaching and Evaluation Scheme:-

Subject Code	Name of the Subject	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)			Total
							Sessional Exam		University Exam		Internal		University	
							Marks	Hrs	Marks	Hrs	Pr/Viva	TW	Pr	
5CS02MOT2	Lesson From Motivational Books	-	-	2	2	1	-	-	-	-	50	-	-	50

Guidelines:

- Students have to identify non-technical book of their interest and read entire contents.
- Prepare brief review of the same in approximately 12 to 15 pages.
- Two times in an academic term, need to present their work progress. Prepare power point presentation of 15 minutes. 25 marks given for each presentation.
- During first presentation; Name of Book identified, Author, Theme of book, Publisher, Year of Publication.
- During second presentation; highlight the motivational statements noted during reading time.
- Submit descriptive report at the end of academic term in soft & hard copy to the Institute which includes, title page, Index, Introduction, Motivational Statements & Paragraphs from the book, message for the individual / society found in the book.
- Formatting specification for reports:
 - .doc file
 - Font size: 12 for Regular text, 14 for subtitles & 16 for titles
 - Font type: Times New Roman
 - Line Spacing: 1.5
 - Margin: 1.5 inch to Left and 1 inch to others sides
 - Pages: A4
 - Alignment: Justify