BACHELOR IN COMPUTER APPLICATION (BCA)

PROGRAM OUTCOME: Bachelor in Computer Applications is an undergraduate programme to start career in applications in IT firm. It helps the students to understand the concepts of key areas in Computer Science. It provides sound academic base to analyze and apply latest technologies to solve problems in the areas of computer applications. It also provides analysis and synthesis involved to develop practical skills to provide solutions to industry, society and business. To develop skilled manpower in the various areas of information technology like: Database management, Software Development, Computer-Languages, Software engineering, Web based applications etc.

PROGRAM SPECIFIC OUTCOME: After completion of Bachelor in Computer Application students will be able to work in IT industries, various public and private sectors etc. They will be able to work on different profiles like web developer, UI designers, testers, coders, SEO developers etc.

Learning outcomes

PLO-1. Design and develop computer programs/computer -based systems in the areas related to algorithms, web design, IoT and data analytics.

PLO-2. Ability to pursue higher studies of specialization and to take up technical employment.

PLO-3. Ability to formulate, to model, to design solutions, procedure and to use software tools to solve real world problems and evaluate.

PLO-4. Ability to operate, manage, deploy and configure software operation of an organization.

PLO-5. Ability to present result using different presentation tools.

PLO-6. Ability to use emerging technologies and tools.

PLO-7. Display ethical code of conduct in usage of Internet and Cyber systems.

PLO-8. Apply standard Software Engineering practices and strategies in real-time software project development

PLO-9. The ability to apply the knowledge and understanding noted above to the analysis of a given information handling problem.

PLO-10. The ability to work independently on a substantial software project and as an effective team membe

SCHEME

BCA – I/ First Year (Annual System)

			Internal						
Group	**Paper Code**	**Subject**	**3 Months**	**6 Months**	**Total**	**Theory**	**Total**	**Practical**	**Grand Total**
Group I	BCA-11	Fundamentals of Computers and PC-Software	5	5	10	40	50	--	100
	BCA-12	Computer System Architecture	5	5	10	40	50	--	
Group II	BCA-13	Programming & Problem Solving through C	5	5	10	40	50	--	100
	BCA-14	Internet & Web Technology	5	5	10	40	50	--	
Group III	BCA-15	Cyber Security	5	5	10	40	50	--	100
	BCA-16	Discrete Mathematics & Algebra	5	5	10	40	50	--	
Group IV	BCA-17	Foundation Course ---Same as B.Sc./B. Com./B. A.					100	--	100
Group V	BCA-P18	Practical based on BCA11, BCA13 & BCA14	--	--	--	--	--	50	50
	TOTAL						400	50	450

NOTE: General BCA Examination rules are same as B.Sc. (Computer Sc.)/(IT).
In each group student is required to obtain minimum 27 marks in theory and 7 marks in internal assessment to pass.
Pattern of Question papers shall be as given below:
There will be three sections in each paper. All questions from each section will be compulsory.
Section A(5=5*1): this section will contain 5 objective type questions. One question from each unit of one mark.
Section B(10=2*5): 5 questions from each unit of 2 marks each with internal choice.
Section C(25=5*5):5 questions from each unit of 5 marks with internal choice.

BCA I YEAR

PAPER-I FUNDAMENTALS OF COMPUTERS AND PC-SOFTWARE

Course Objective: This course is designed into two sections Fundamental and PC-Software, Fundamental section is designed to understand the basic terminologies of computer including hardware and software. PC-Software section focuses on providing basic training of Office automation software.
Course Outcome: After completing the course students will be able to understand the basic operations of computer and will be able to opt for jobs as an Office Automation Clerk, Support Assistant.

UNIT-I

Introduction to Computers: History of development of Computers. Characteristics, Capabilities and limitations, Generations of Computers. Classification of Computers, Basic Components of a computer system – Control Unit, ALU, I/ O Devices, Memory – RAM, ROM, with its type, Flash Memory. Types of Software – System software, Application software, Utility Software, Open source software. Operating Systems – Functions, languages and packages. Binary data representation in computers. Computer Viruses. Secondary storage device, FAT, file & directory structure and naming rules, booting process.

UNIT-II

Linux: Features of Linux — Prons and Cons of Linux, Workspace, The Panel,Taskbar, Titlebar, Window Manager, Manipulating Windows: Focus, Logout, Maximize and Minimize, resize, move, rollup, unroll, close, move to workspace, Logout, shutting down the system, Launchers, date and time, file manager, creating, deleting, moving and modifying the permissions of folders, Trash Can, Graphic image access, Creating and managing folders.
LibreOffice: Introduction to LibreOffice, Advantages of LibreOffice, Minimum requirements, Toolbars, displaying or hiding toolbars, sub-menus and tool palattes, moving toolbars, floating toolbars, customizing toolbars.

UNIT-III

Introduction to Writer: Introduction to writer, Features of writer, Parts of main window, Menu bar, Rulers, Status bar, context menus, slide bar, Starting new documents, opening existing documents, saving documents, Save command, Save As command, password protection, changing password, saving document automatically, opening and saving files, renaming and deleting files, using the navigator, undoing and redoing changes, reloading a document, closing a document, word and character count, page style, selecting text, selecting vertical block of text, cutting copying and pasting text , find and replacing text, insert special characters, macros, checking spelling and grammar, using synonyms and the thesaurus, Auto Correct, footnote, Endnote, bookmark, hyperlink, line number, paragraph settings, border, DropCaps, Formatting characters: font name, size, effects, bullets and numbering, Formatting pages: page break, page margins, page number, Inserting Header, Footer, page number, border, background, print a page, Template, insert images, resizing, rotate, flipping, compress and deleting an image, working with drawing tools: insert, resize, grouping, rotating, positioning

image with text, wrapping text. Working with fontwork object, Working with Tables, Mail Merge.

UNIT-IV

Introduction to Impress: Introduction, features, creating, Adding, saving, renaming and removing slides, and printing a presentation, adding, deleting and formatting comment, slide view, outline view, slide sorter view, notes view and slide show view. Changing text font and size, selecting text style and color, set header and footer, Using, bullets, ClipArt and word art gallery. Applying design template, Inserting graph adding transitions and animation effects, setting timings for slide show preparing note pages, preparing audience handouts.

Introduction To CALC Spreadsheet: Definition of Calc, Workbook, Working On worksheet, cells, title bar, menu bar, toolbar, formula bar, status bar, creating, opening and saving spreadsheets, password protection, sheet navigation, working with rows and columns, viewing Calc, editing and formatting data, merging and splitting cells, formatting data, Auto format of cells and sheets, conditional formatting, hiding and showing data, sorting records, find and replace, creating & formatting charts and graphs, using style and templates, working with graphics. Drawing tools, printing a spreadsheet, adding header and footer, formulas and functions.

UNIT-V

Overview of System Analysis and Design, System Development Life Cycle, Preliminary Investigation, Feasibility Study, System Analysis, System Design and Testing, Implementation & Evaluation. Overview of MIS: Introduction, Role of IT, MIS - characteristics and application areas, Business and Technology trends -specialization, management by methodology, decentralization, internationalization. Characteristics of a good Business Unit.

TEXT BOOKS:

1. Computers Fundamentals and Architecture by B. Ram
2. William Stallings, Operating System, Pearson Education
3. Norton, Introduction to Computers, McGraw Hill
4. Fundamentals of Computers: P. K. Sinha
5. System Analysis and Design by Elias M Awad.

REFRENCES BOOKS:

1. Computers Today: Suresh K.Basandra
2. Operating System: Achyut S. Godbole
3. Management Information systems by Gerald V. Post & David L. Anderson.
4. Understanding Computer Fundamentals & Dos By G.K. Iyer

Practical list

1. Write steps for creating a formatted CV having the following fields objective, name, father's name, mother's name, DOB, address, email-id, qualification, hobbies etc.
2. Create a formatted "Appreciation Certificate" and "Certificate of Proficiency" for the best student.
3. Create a formatted table using Table Menu and do all the operation of the table.
4. Create a formatted pay slip of 10 employee having following fields:
   Employee No, Employee Name, Designation, Phone No, Address, Basic Pay, DA (60% of basic), HRA, Gross Pay.
5. Create a formatted mark sheet and also prepare a chart.
6. Do the following things with tables

a. Maximize row width and height.

b. Centre text in cells.

c. Change text and cell color

7. Create a presentation using animation on topic "Basics of Computers".
8. Do the following things with Header and Footer

a. Use Header & Footer to insert a header, including your last name and the page number, positioned at the top right side of the page.

b. Your name should be separated from the number using a vertical line, similar to "Smith | 1".

c. Use Roman numerals (i, ii, iii, etc.) for the page numbers for the Table of Contents, List of Figures, and List of Tables pages.

9. Create a presentation on College Assembly using image, video, and song with 10 slides.
10. Send an invitation letter to your five friends for birthday party using Mail Merge.

BCA I YEAR
PAPER-II COMPUTER SYSTEM ARCHITECTURE

Course Objective: The course is intended as a general introduced to the architecture of computer systems. To understand various representation techniques (fixed point and floating point representation). To familiarize with logic gates and the working combinational and sequential circuit. To understand the various memory management techniques.
Course Outcome: Students will be able to understand the computer arithmetic with regards to its architecture. Student will be to compare different memory management schemes. Students will able to understand the functional units of a computer.

UNIT-I
DATA REPRESENTATION- Data types, Number Systems: Binary number system, Octal &Hexa–Decimal Number system. **Fixed-Point Representation:** 1s & 2s complement, Binary fixed- point representation. Arithmetic operation on binary numbers, overflow & underflow.

UNIT-II
DIGITAL LOGIC CIRCUITS: Logic gates, AND, OR, NOT, GATE& their truth tables, NOR NAND & XOR gates. **BOOLEAN ALGEBRA: Demorgan's** theorem. **MAP SIMPLICATION:** Minimization techniques, K-Map. Sum of product & product of sums. **COMBINATIONAL & SEQUENTIAL CIRCUITS:** Half adder, full adder, full subtractor, Flip-Flops-RS, & T Flip-Flops, Shift registers, counters.

UNIT-III
CPU ORGANISATIONS- ALU & CONTROL CIRCUIT: Idea about arithmetic circuit program control, Instruction sequencing. **INTRODUCTION TO MICROPROCESSOR:** Microprocessor Architecture (8086), System buses, Register, program counter, Block diagram of a Micro Computer System. Microprocessor control signals, Interfacing devices. **INTRODUCTION TO MOTHER BOARD:** Idea about different cards and their functions, SMPS.

UNIT-IV
INPUT-OUTPUT ORGANISATION: I/O interface, properties of Simple I/O Devices and their controller, Isolated versus memory-mapped I/O, Modes of Data Transfer, Synchronous & Asynchronous Data Transfer, Handshaking, Asynchronous serial transfer, I/O processor.

UNIT-V
MEMORY ORGANISATION : Auxiliary memory, Magnetic drum, Disk & Tape Semiconductor memories, Memory Hierarchy, Associative memory, Virtual memory, Address space & memory space, Address Mapping, Page table, Page replacement, Cache memory, Hit Ratio, Mapping techniques, Writing into cache.

TEXT BOOK:

Computer System Architecture by: M. MORRIS MANO

Reference Books:

1. Computer Organization and Architecture by John P Hayes
2. Computer Organization and Architecture by Raj Kamal and Niholas Carter
3. Computer Organization and Architecture by William Stallings

BCA I YEAR
PAPER-III PROGRAMMING AND PROBLEM SOLVING THROUGH 'C'

Course Objective: The course aims to provide exposure to problem-solving through programming. It aims to train the student to the basic concepts viz. conditional and decision making, file handling of the C-programming language. This course involves a lab component which is designed to give the student hands-on experience with the concepts.
Course Outcome: After the course the students will be able to identify and abstract the programming task, will be able to write pseudo-code of the task, choose the right data representation formats based on the requirements of the problem and hence use the language to efficiently solve the task.

UNIT-I
Classification of programming language: Structured programming concepts, modular programming, top-down programming approach. **Problem solving using computer:** coding, compilation, debugging and testing, documentation, implementation and maintenance**.** **Problem- Solving Techniques**: Steps for Problem-Solving, Design of Algorithms, Definition, Features of Algorithm. Flowcharts, Basic Symbols used in Flowchart Design. **Basics of C:** History of C, salient Features of C, Structure of a C Program, a Simple C Program, Compiling a C Program, Link and Run the C Program.

UNIT-II
Variables and Constants: Character Set, Identifiers and Keywords, Rules for Forming Identifiers, Data Types, Qualifiers, Variables, Declaring Variables, Initialising Variables, Constants, Types of Constants, operators, expressions, operator precedence and associativity. **Conditional Statements and Loops:** Decision Control Statements: if Statement, switch Statement, Loop Control Statements: while Loop, do-while Statement, for Loop, Nested Loop, goto Statement, Break Statement, Continue Statement. Storage Classes, Managing input/output function: formatted and unformatted.

UNIT-III
Functions: Definition of a Function, types of function, Declaration of a Function, Function Prototypes, passing arguments to a function, call by value, call by reference, command line argument, recursion. **Pointers:** pointers and their characteristics, address and indirection operators, pointer Type declaration and assignment, pointer arithmetic, passing pointers to functions, array of pointers, introduction to pointer to pointer.

UNIT-IV
Array: one dimensional array Declaration, Initialization, insertion, deletion of an element form an array, finding the largest/smallest element in an array, two dimensional arrays, addition/multiplication of matrices. **String:** Declaration and Initialization of Strings, Array of

Strings, Built-in String Functions strlen, strcpy, strcmp,strcat, strlwr, strrev Function, Other String Functions. **Structures and Unions:** Declaration of Structures, Accessing the Members of a Structure, Initializing Structures, Structures as Function Arguments, Structures and Arrays, Unions, initializing an Union, Accessing the Members of an Union.

UNIT-V

File Handling: Concept of files, Open a file using the function fopen(), Close a file using the function fclose( ), file opening mode. Input and Output using file pointers, Character Input and Output in Files, String Input / Output Functions, Formatted Input / Output Functions, Block Input / Output Functions, Sequential Vs Random Access Files, text file vs binary file.

Text Books:

E. Balagurusamy ," Programming in ANSI C" How to solve it by computer by R.G.Dromy, PHI
Let us C by Yashwant Kanetkar Programming in C by S.S.Bhatia
A first course in Programming with C, T. Jeypoovan

References Books:

Programming in C: Denis Ritchie
"C The Complete Reference", H. Schildt, Tata McGraw Hill
Programming and problem solving through 'C'(Elsevier)

Practical List

Integers

1. C Program to Check if a given Integer is Odd or Even
2. C Program to Calculate the Sum of Odd & Even Numbers
3. C Program to Check if a given Integer is Positive or Negative
4. C Program to Find the Number of Integers Divisible by 5
5. C Program to Read Two Integers M and N & Swap their Values
6. C Program to Accept two Integers and Check if they are Equal
7. C Program to Compute the Sum of Digits in a given Integer

Conversions

8. C Program to Convert the given Binary Number into Decimal
9. C Program to Convert a Decimal Number to Binary & Count the Number of 1s
10. C Program to Convert a Given Number of Days in terms of Years, Weeks & Days

Recursions

11. C Program to find Sum of Digits of a Number using Recursion
12. C Program to find Reverse of a Number using Recursion
13. C Program to find Sum of N Numbers using Recursion
14. C Program to find whether a Number is Prime or Not using Recursion

Structure

15. C Program to Display the Inventory of Items in a Store

16. C Program to Display the ATM Transaction Functions
17. C Program to Illustrate Pass by Reference
18. C Program to Illustrate Pass by Value Use of Arguments
19. C Program to Input 3 Arguments and Operate Appropriately on the Numbers
20. C Program to Print the Program Name and All its Arguments

BCA I YEAR
PAPER-IV INTERNET & WEB TECHNOLOGY

Course Objective: The course is intended to introduce the concepts of various techniques related to Internet, familiarize with the structure of various topologies and protocols and to learn the static web development technologies.
Course Outcome: Students will be able to work with various concepts and features of Network, Internet and also able work with static web development using HTML, JavaScript and CSS.

UNIT-I
Introduction: Internet, Growth of Internet, Owners of the Internet, Anatomy of Internet, ARPANET and Internet history of the World Wide Web, basic Internet Terminology, Net etiquette. Internet Applications – Commerce on the Internet, Governance on the Internet, Impact of Internet on Society– Crime on/through the Internet. **Internet Technology and Protocol** -Packet switching technology, Internet Protocol TCP/IP, Router, Internet Addressing Scheme: Machine Addressing (IP address), E-mail Addresses, Resources Addresses.

UNIT-II
Internet Connectivity types: level one, level two and level three connectivity, Setting up a connection: hardware requirement, selection of a modem, software requirement, modem configuration, Internet accounts by ISP: Telephone line options, Protocol options, Service options, Telephone line options – Dialup connections through the telephone system, dedicated connections through the telephone system, ISDN, Protocol options – Shell, SLIP, PPP.
Network definition, Common terminologies: LAN, WAN, Node, Host, Workstation, bandwidth, Interoperability, Network administrator, network security, **Network Components:** Severs, Clients, Communication Media, **Types of network:** Peer to Peer, Clients Server, Addressing in Internet: DNS, Domain Name and their organization, understanding the Internet Protocol Address. **Network topologies:** Bust, star and ring, Ethernet, FDDI, ATM and Intranet.

UNIT-III
Email Networks and Servers, Email protocols –SMTP, POP3, IMAP4, MIME6, Structure of an Email – Email Address, Email Header, Body and Attachments, Email Clients: Netscape mail Clients, Outlook Express, Web based E-mail. Email encryption- Address Book, Signature File.
Current Trends on Internet: Languages, Internet Phone, Internet Video, collaborative computing, e-commerce. Overview, SGML, Web hosting, HTML. Documents Interchange Standards, Components of Web Publishing, Document management, Web Page Design Consideration and Principles, Search and Meta Search Engines, WWW, Browser, HTTP.

UNIT-IV
HTML page structure, HTML Attributes, HEAD Elements, Input elements, HTML Text, HTML links, HTML document tables, HTML Frames, HTML Images, multimedia, Introduction to CSS. **Introduction to JavaScript:** Basic Syntax. Control Structures. Writing Functions. Working with Arrays. The Document Object Model. Events Handling.

UNIT-V

Introduction to AJAX: AJAX, RIA & WEB 2.0. **Interactivity Tools:** ASP, VB Script, JAVA Script, JAVA and Front Page, Flash, Internet Security Management Concepts, Information Privacy and Copyright Issues. Overview of Internet Security, Firewalls.

Text Books:

1. Greenlaw R and Hepp E "Fundamentals of Internet and www" 2nd EL, Tata McGrawHill,2007.
2. Ivan Bayross, "HTML, DHTML, JavaScript, Perl CGI", 3rd Edition, BPB Publications.
3. D. Comer, "The Internet Book", Pearson Education, 2009.
4. "HTML5 Black Book" 2nd Edition Dreamtech Press.

Reference Books:

1. M. L. Young,"The Complete reference to Internet", Tata McGraw Hill, 2007.
2. Godbole AS &Kahate A, "Web Technologies", Tata McGrawHill,2008.
3. Jackson, "Web Technologies", Pearson Education, 2008.
4. B. Patel &Lal B. Barik, " Internet & Web Technology ", Acme Learning Publishers
5. Leon and Leon, "Internet for Everyone", Vikas Publishing House.

Practical list

1. Write a program to write a paragraph using text formatting tag, paragraph tag and heading tag.
2. Write a program to create a navigation menu using list and hyperlink.
3. Write a program to design a banner using image tag and border.
4. Design a webpage on National Leader.
5. Design a webpage of your resume using table tag and image.
6. Design a webpage to print electricity bill.
7. Design email signup form.
8. Write a java script to convert lower case to upper case.
9. Write a java script to print table of an entered number.
10. Write a java script to find maximum and minimum value among three entered amount.
11. Write a java script for password validation.
12. Write a java script to change the back color using prompt.
13. Write a java script to find a number is even or odd.
14. Create a web page using CSS.
15. Write a java script to print the reverse of an entered number.

BCA I YEAR
PAPER-V CYBER SECURITY

Course Objective: Cyber security is one of the greatest challenges of contemporary society, and it will only become more complicated as we progress therefore the depth of knowledge and wealth of skills required to engage with and overcome these challenges. Cyber security comprises technologies, processes and controls that are designed to protect systems, networks and data from cyber-attacks. Effective cyber security reduces the risk of cyber-attacks, and protects organizations and individuals from the unauthorized exploitation of systems, networks and technologies.

Course Outcome: The study of Cyber Security helps to gather and analyze data, and learn techniques to accurately present and communicate findings. It aims to empower and enhance proficiency in cyber security among learners and provides guidance on cyber security trends, industry best practices, protective measures against cyber threats, and more. A solid cyber security foundation will identify technology gaps and propose the appropriate action to take to mitigate the risk of an attack. This provides organizations the confidence to build their cyber security strategies.

UNIT-I

Basic of Communication Systems, Transmissions Media, ISO/OSI and TCP/IP Protocol Stacks, Local Area Networks, Internet working, Packet Formats, Wireless Networks, Working of Internet.

UNIT-II

Security principles, threats and attack techniques, Introduction to security, Information, security, Security triad, Security management, Authentication and access control, Security threats and attacks, Security management, Authentication and access control Identification, Authentication: Authentication by passwords, Protecting passwords, Access control structures, Types of access control.

UNIT-III

Cryptography, Cryptographic mechanisms, Conventional Encryption Principles, Public Key Cryptography Principles, Applications of Public-Key Cryptosystems, Requirements of Public-key Cryptography, RSA Public-key algorithm, Digital signatures and Certificates.

UNIT-IV

Bell–LaPadula (BLP) Model: State Set, Security Policies, Star Property, Tranquility, Aspects and Limitations of BLP, Security models: The Biba Model, Chinese wall model, Clark–Wilson Model, SSL/TLS protocol, Firewalls and Intrusion detection.

UNIT-V

Unix security: Architecture, Principals, Subjects, Objects, Access Control, Management Issues. Windows Security: Architecture, Components of Access Control, Administration. Database Security: Relational Databases, Access Control, Statistical Database Security. Software Security: Malware Taxonomy, Hackers, The rlogin Bug and SQL Injection.

Text Books:

1. Computer Security, 2nd edition Author: Dieter Gollmann, Publisher: John Wiley & Sons, 2016, ISBN: 0-470-86293-9
2. Security in Computing, Fourth Edition Author: Charles P. Pfleeger, Shari Lawrence, Publisher: Pearson India
3. Cryptography and Network Security Principles and Practices 3rd edition, Author: William Stallings Pearson Education.

BCA I YEAR
PAPER-VI DISCRETE MATHEMATICS AND ALGEBRA

Course Objective: This course is designed to make students realize the concepts of Discrete mathematics and its applications to real –world problems.

Course Outcome: Upon successful completion of this course, the student will be able to:

- Confer the knowledge of different types of logical connectives, truth tables, tautologies and validity of statements.
- Comprehend the important mathematical concepts and properties of Boolean algebra.
- Understand the notion of algebra of electric circuits and its application in switching circuits.
- Impart fundamental concepts, results and techniques in graph theory and its applications.

UNIT-I

Mathematical Logic: Set: definition, types, operation, set of integers and set of integers modulo p. Mathematical logic, conjunction, disjunction and negations, basic logical operations, tautology, contradiction, logical equivalence, algebra of proposition, converse, inverse and contra positive proposition, proofs by using truth table, application of logic to test validity of statements.

UNIT-II

Boolean Algebra: Definition, examples, principle of duality, properties, concept of inclusion, implication and bi-implication, Boolean sub algebra and its examples.

UNIT-III

Boolean Functions: Boolean functions, normal form, types of normal form: disjunctive normal form, complete disjunctive normal form, conjunctive normal form, complete conjunctive normal form, algebra of electric circuits and its application in switching circuits.

UNIT-IV

Graphs: Concept of graphs, definition, examples and types of graph, degree of vertex, isolated vertex, pendant vertex. sub graphs, walk, paths and circuits, connected graphs, components and shortest path distance.

UNIT-V

Tree: Definition, examples, properties, rooted tree, binary tree. Applications of graphs: Konigsberg bridge problem, three utilities problem.

Text Books:

1. D.C. Agrawal, "Mathematical Foundations of Computer Science", Shree Sai Prakashan.

2. Kenneth H. Rosen, "Discrete Mathematics and its Applications", Mc.Graw Hill, 2002.

3. H. K. Pathak, D. C. Agrawal "A text book of Discrete Mathematics", Shiksha Sahitya Prakashan, Meerut.

Reference Books:

1. Seymour Lipschutz, M. Lipson, "Discrete Mathemataics" Tata Mc Graw. Hill,2005.

2. B.R. Thakur, R.S.Chandel, Algebra and Trigonometry: Ram Prasad and Sons.

3.V.Krishnamurthy, "Combinatories: Theory an Applications",East-West Press.