MARATHA VIDYA PRASARAK SAMAJ'S
KARMAVEER ADV. BABURAO GANPATRAO THAKARE
COLLEGE OF ENGINEERING
Permanently Affiliated to Savitribai Phule Pune University Vide Letter No: CA/1542
& Approved by AICTE New Delhi Vide Letter No: 740-89-32 (E) ET/98
AISHE Code - C-41622
KBTCOE
NAAC
www.kbtcoe.org

Department of Information Technology

Course Outcome

Department Vision

To be the centre for excellence in the development of IT solutions with specific approach of industry interface, blended learning and project based learning leading to the development of globally competent graduates and life-long learners.

Department Mission

Committed to develop students as competent IT professionals for employment and self employment by adapting to the innovative and interactive academic process to acquire domain specific technical knowledge, soft skills and social responsibilities.

Program Educational Objectives

- Graduates will analyze, design and implement modern computing problems by applying their knowledge of mathematics, information technology, and emerging technologies.
- Graduates will possess an attitude and aptitude for research, entrepreneurship and higher studies in the field of Information Technology.
- Graduates will be aware of their professional, ethical, legal, and social responsibilities and contributions towards the betterment of society through active engagement with professional societies and other community activities.

Program Outcomes

PO1	**Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	**Problem Analysis:** Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	**Design/development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet t h e specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	**Conduct Investigations of Complex Problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	**Modern Tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
PO6	**The Engineer and Society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	**Environment and Sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	**Individual and Team Work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	**Project Management and Finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	**Life-long Learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes

PS01	An ability to apply knowledge of mathematics, basic computing fundamental and problem-solving strategies to provide effective IT solutions.
PS02	An ability to solve real-world problems using IoT, Cloud computing, Data science, computer network & security, Machine learning and different hardware & software tools.
PS03	An ability to communicate and work effectively as an individual, member or leader in team to manage projects effectively to achieve the desired goal.

SECOND YEAR COURSE OUTCOMES

AY 2020-21

SEMESTER - I

C201	**Discrete Mathematics**
C201.1	Apply formal proof techniques and solve the problems with logical reasoning
C201.2	Evaluate the combinatorial problems by using probability theory.
C201.3	Design binary tree using tree traversal techniques.
C201.4	Analyze types of relations and functions to provide solution to computational problems
C201.5	Evaluate techniques of number theory and its application.
C201.6	Solve problems using fundamental algebraic structures
C201.1	Apply formal proof techniques and solve the problems with logical reasoning

C202	**LDCO**
C202.1	To perform basic binary arithmetic & simplify logic expressions.
C202.2	To grasp the operations of logic ICs and Implement combinational logic functions using ICs
C202.3	To comprehend the operations of basic memory cell types and Implement sequential logic functions using ICs
C202.4	To articulate the functions & organization of various blocks of CPU.
C202.5	To compare the processors by understanding the CPU instruction characteristics and enhancement features of CPU.
C202.6	To compare an assortment of memory types (with their characteristics) used in computer Systems and basic principle of interfacing input, output devices.

C203	**Data Structures and Algorithms**
C203.1	Perform basic analysis of algorithms with respect to time and space complexity.
C203.2	Implement appropriate searching and/or sorting techniques in the application development.
C203.3	Develop abstract data type (ADT) for given application using Stack and Queue.
C203.4	Implement different advanced ADT and nonlinear data structures such as Tree.
C203.5	Implement different algorithm techniques for graphs and their applications.
C203.6	Design different hashing functions and use files organizations.

C204	**Object Oriented Programming**
C204.1	Differentiate various programming paradigms and apply basic concepts of OOP.
C204.2	Identify classes, objects, methods, and handle object creation, initialization, and destruction to model real-world problems.

C204.3	Identify relationship among objects using inheritance and polymorphism.
C204.4	Handle different types of exceptions and perform generic programming.
C204.5	Apply file handling for real world application.
C204.6	Apply appropriate design patterns to provide object-oriented solutions.

C205	**Basics of Computer Network**
C205.1	Understand and explain the concepts of communication theory and compare functions of OSI and TCP/IP models.
C205.2	Analyze data link layer services, error detection and correction, linear block codes, cyclic Codes, framing and flow control protocols.
C205.3	Compare different access techniques, channelization and IEEE standards.
C205.4	Apply the skills of subnetting, supernetting and routing mechanisms.

C206	**LDCO Laboratory**
C206.1	Use logic function representation for simplification with K-Maps and design Combinational logic circuits using SSI & MSI chips
C206.2	Design Sequential Logic circuits: MOD counters using synchronous counter.
C206.3	Understand the basics of simulator tool & stimulate basic blocks such as ALU & Memory

C207	**Data Structures and Algorithms Laboratory**
C207.1	Analyze algorithms and to determine algorithm correctness and time efficiency class
C207.2	Implement abstract data type (ADT) and data structures for given application.
C207.3	Design algorithms based on techniques like brute -force, divide and conquer, greedy, etc.).
C207.4	Solve problems using algorithmic design techniques and data structures.
C207.5	Analyze of algorithms with respect to time and space complexity.

C208	**Object Oriented Prog. Language**
C208.1	Differentiate various programming paradigms and apply basic concepts of OOP.
C208.2	Identify classes, objects, methods and apply object creation, initialization, destruction to real world problems.
C208.3	develop solution to the problem using various types of inheritance and polymorphism
C208.4	Develop solution to the problem using exception handling and generic programming.
C208.5	Apply file handling for real world applications.
C208.6	Apply appropriate design patterns to provide object-oriented solutions.

C209	**Communication Skills**
C209.1	Introspect about individual's goals, aspirations by evaluating one's SWOC and think creatively.

C209.2	Develop effective communication skills including Listening, Reading, Writing and Speaking.
C209.3	Constructively participate in group discussion, meetings and prepare and deliver Presentations.
C209.4	Write precise briefs or reports and technical documents.
C209.5	Practice professional etiquette, present oneself confidently and successfully handle personal interviews .
C209.6	Function effectively in multi-disciplinary and heterogeneous teams through the knowledge of team work, Inter-personal relationships, conflict management and leadership quality.

C210	**Audit course - Ethics and Values in Information Technology**
C210.1	Adapt the global ethical principles and modern ethical issues
C210.2	Apprehend ethics in the business relationships and practices of IT.
C210.3	Implement trustworthy computing to manage risk and security vulnerabilities.
C210.4	Analyze concerns of privacy, privacy rights in information-gathering practices in IT.

SECOND YEAR COURSE OUTCOMES

AY 2020-21

SEMESTER - II

C211	**Engineering Mathematics –III**
C211.1	Solve higher order linear differential equations.
C211.2	Solve problems related to Fourier transform, Z –Transform to solve difference equation.
C211.3	Apply statistics methods like correlation, regression analysis in analyzing, interpreting experimental data.
C211.4	Apply Probability Distribution like binomial, Poisson, Normal for testing the given data.
C211.5	Solve algebraic and transcendental equations and system of linear equations using numerical techniques.
C211.6	Use Numerical methods to compute integration and differential equations.

C212	**Processor Architecture**
C212.1	Use architectural details of PIC 18 microcontroller for problem solving
C212.2	Implement embedded C programming for PIC 18.
C212.3	Use concepts of timers and interrupts of PIC 18.
C212.4	Demonstrate real life applications using PIC 18.
C212.5	Analyze architectural details of ARM processor
C212.1	Use architectural details of PIC 18 microcontroller for problem solving

C213	Database Management System
C213.1	Apply fundamental elements of database management systems
C213.2	Design ER-models to represent simple database application scenarios
C213.3	Design and develop SQL queries on data for relational databases
C213.4	Improve the database design by normalization & to incorporate query processing
C213.5	Apply ACID properties for transaction management and concurrency control
C213.6	Analyze various database architectures and technologies

C214	Computer Graphics
C212.1	Apply mathematical and logical aspects for developing elementary graphics operations
C212.2	Employ techniques of geometrical transforms to produce position and manipulate Objects in 2 dimensional and 3-dimensional spaces respectively.
C212.3	Apply a clipping algorithm to produce 3D images.
C212.4	Apply concepts of rendering, shading using computer graphics tools to design 2D, 3D Modelling.
C212.5	Apply the concept of animation using computer graphics tools.
C212.6	Articulate the concepts of virtual reality.

C215	Software Enginnering
C215.1	Classify various software application domains
C215.2	Analyze software requirements by using various modeling techniques.
C215.3	Translate the requirement models into design models
C215.4	Apply planning and estimation to any project
C215.5	Use quality attributes and testing principles in software development life cycle
C215.6	Articulate recent trends in Software engineering by using CASE and agile tools

C216	PSDL
C216.1	Apply embedded C programming concepts to solve given problem
C216.2	Develop and Execute embedded C program to perform array addition, block transfer, sorting operations
C216.3	Perform interfacing of real-world input and output devices to PIC18 microcontroller
C216.4	Use platform like Raspberry-Pi /Arduino

C217	Database Management System Lab
C217.1	To install and configure database systems.
C217.2	To analyze and design a database schema using entity relationship models.
C217.3	To design and implement a database schema for a given problem-domain using SQL DDL commands.
C217.4	To populate and query a database using SQL DML / DCL commands.
C217.5	To design a backend database of any one organization.

C218	Computer Graphics Laboratory
C218.1	Apply line & circle drawing algorithms to draw the objects.
C218.2	Apply polygon filling methods for the object
C218.3	Apply polygon clipping algorithms for the object
C218.4	Apply the 2D transformations on the object
C218.5	Implement the curve generation algorithms

C218.6	Implement the animation of any object using animation principles

C219	**PBL**
C219.1	Design solution to real life problems and analyze it
C219.2	Apply learning in PBL to promote lifelong learning.
C219.3	Tackle technical challenges for solving real world problems with team efforts.
C219.4	Collaborate and engage in multi-disciplinary learning environments.

C220	**Intellectual Property Rights**
C220.1	Exhibit the concepts of Intellectual Property Rights
C220.2	Differentiate among different IPR
C220.3	Formulate and characterize innovative ideas and inventions into IPR.
C220.4	Demonstrate knowledge of advances in patent law and IP regulations.

THIRD YEAR COURSE OUTCOME
AY 2019-20
SEMESTER – I

C301	**Theory of Computation**
C301.1	To construct finite state machines to solve problems in computing
C301.2	To write mathematical expressions for the formal languages
C301.3	To apply well defined rules for syntax verification
C301.4	To construct and analyze Push Down Automata and Post Machine for formal languages
C301.5	To construct and analyze Turing Machine for formal languages.
C301.6	To express the understanding of computational complexity, decidability and decidability problems

C302	**Database Management Systems**
C302.1	Define basic functions of DBMS & RDBMS, analyze database models & entity relationship
C302.2	Design and implement a database schema for a given problem-domain. Also Populate and query a database using SQL DML/DDL commands.
C302.3	Implement PL/SQL programming and basic concepts of transaction, transaction processing and concurrency control.
C302.4	Distinguish between different types of database architectures and also their applications.
C302.5	Analyze the impact of big data on the information industry and the external ecosystem for analytical and data services.
C302.6	Evaluate different emerging database technologies, data warehousing and data mining.

C303	**Software Engineering & Project Management**
C303.1	To identify unique features of various software application domains and classify software Applications
C303.2	To choose and apply appropriate lifecycle model of software development.
C303.3	To describe principles of agile development, discuss the SCRUM process and distinguish agile process model from other process models
C303.4	To analyze software requirements by applying various modeling techniques
C303.5	To list and classify CASE tools and discuss recent trends and research in software engineering

C303.6	To list and classify CASE tools and discuss recent trends and research in software engineering

C304	**Operating System**
C304.1	Demonstrate shell scripting language
C304.2	Evaluate problems on process and thread scheduling.
C304.3	Analyze concepts of process synchronization
C304.4	Illustrate memory management techniques
C304.5	Compare disk scheduling and I/O management techniques.
C304.6	Relate different functionalities of operating system with LINUX OS (apply level)

C305	**Human-Computer Interaction.**
C305.1	To Determine importance of HCI study and principles of User-Centred Design (UCD) approach.
C305.2	To Develop human factors in HCI design.
C305.3	To Develop a model, paradigms and context of interactions.
C305.4	To Design effective user-interfaces following a structured and organized UCD process.
C305.5	To Evaluate usability of a user-interface design.
C305.6	To Apply cognitive models for predicting human-computer-interactions.

C306	**Software Laboratory-I**
C306.1	Install and configure database systems.
C306.2	Analyze database models & entity relationship models.
C306.3	Populate and query a database using SQL DML/DDL commands.
C306.4	Populate and query a database using MongoDB commands.
C306.5	Implement the relational and document type database systems.

C307	**Software Laboratory-II**
C307.1	Implement Shell Programming
C307.2	Demonstrate concurrency control in Operating System
C307.3	Implement basic building blocks of OS like process & threads
C307.4	Demonstrate file handling system calls

C307.5	Implement a new system call in the Linux

C308	**Software Laboratory-III**
C308.1	To Identify the needs of users through requirement gathering.
C308.2	To Apply the concepts of Software Engineering process models for project development.
C308.3	To Apply the concepts of HCI for user-friendly project development
C308.4	To Develop a website on live web server and access through URL.
C308.5	To Apply various web technologies.

C309	**Audit course 3**
C309.1	Identify the latest digital marketing trends.
C309.2	Explore management of digital assets as per marketing needs

THIRD YEAR COURSE OUTCOME
AY 2019-20
SEMESTER - II

C310	**Computer Network Technology**
C310.1	To Determine responsibilities, services offered and protocol used at each layer of network.
C310.2	To Illustrate different addressing techniques used in network.
C310.3	To Compare between different types of network.
C310.4	To Select, the different wireless technologies and IEEE standards
C310.5	To Apply the standards and protocols learned, for application development.
C310.6	To valuate recent trends in network domain

C311	**Systems Programming**
C311.1	To implement the major concepts of language processing.
C311.2	To implement different System Programs.
C311.3	To analyze tool LEX for generation of Lexical Analyzer.
C311.4	To analyze YACC tool for generation of syntax analyzer
C311.5	To predict output for all the phases of compiler.
C311.6	To apply code optimization.

C312	**Design and Analysis of Algorithms**
C312.1	Identify the basic properties of algorithm and analyze it using different methods. and design paradigm for solving a few example problems and analyze them.
C312.2	Design algorithms using divide and conquer and Greedy method for searching & sorting, knapsack problem, minimum cost spanning tree, single source shortest path problem etc. and
C312.3	Apply dynamic programming paradigm to solve travelling sales person problem,0/1 knapsack problem, Optimal binary search tree.
C312.4	Apply traversal methods on search trees and search methods on graphs and backtracking search methods on state space trees for few example problems.
C312.5	Analyze branch and Bound search methods through problems such as 0/1 knapsack problem, Travelling sales person problem
C312.6	Evaluate P ,NP,NP hard, NP complete class of problems and algorithms

C313	**Cloud Computing**
C313.1	To explore the need of cloud based solutions.

C313.2	To illustrate virtualization and common standards in cloud.
C313.3	To select effective techniques to program Cloud Systems for different application.
C313.4	To explore security mechanisms and issues in various cloud applications.
C313.5	To integrate cloud computing with IoT.
C313.6	To understand emerging trends in cloud computing.

C314	**Data Science & Big Data Analytics**
C314.1	Explore Big Data Processing Architectures
C314.2	Apply different mathematical models for Big Data.
C314.3	Use big data processing technologies.
C314.4	Analyze different datasets using R Programming
C314.5	Explore different tools of big data analysis
C314.6	Analyze impact of different big data technologies in real life

C315	**Software Laboratory – IV**
C315.1	To design a small size network and its use of various networking commands.
C315.2	To use the protocol design at various layers using various networking and simulations tools.
C315.3	To create various client/server environments to use application layer protocols
C315.4	To illustrate the protocol design at various layers.
C315.5	To use protocols in various wired and wireless applications.
C315.6	To Develop applications on emerging trends.

C316	**Software Laboratory-V**
C316.1	Student will be able to design and implement two pass assembler and macro for hypothetical machine instructions.
C316.2	Student will be able to design and implement different phases of compiler.
C316.3	Student will be able to use the tools "Lex" and "YACC" for implementation of simple Calculator.
C316.4	Student will be able to apply Divide & Conquer as well as Greedy approach to design algorithms.
C316.5	Student will be able to illustrate different problems using Dynamic Programming
C316.6	Student will be able to analyze the solution using recurrence relation.

317	**Software Laboratory-VI**
317.1	To apply Big data primitives and fundamentals for application development.
317.2	To explore different Big data processing techniques for different applications
317.3	To apply the Analytical concept of Big data using R/Python
317.4	To visualize the Big Data using Tableau.
317.5	To design algorithms and techniques for Big data analytics.
317.6	To design Big data analytic application for emerging trends

318	**Project Based Seminar**
318.1	Gather, organize, summarize and interpret technical literature with the purpose of formulating a project proposal.
318.2	Define intended future work based on the technical review.
318.3	Present the study using graphics and multimedia presentation.
318.4	Write a technical report summarizing state-of-the-art on an identified topic.

319	**Audit course 4**
319.1	Apply social values and ethics in decision making at social or organizational level
319.2	Demonstrate basic features of Indian Constitution.

FINAL YEAR COURSE OUTCOME
AY 2019-20
SEMESTER – I

C401	**Information and Cyber Security**
C401.1	Students will be able to understand fundamentals of security and Intrusion detection system with its types.
C401.2	Students will be able to perform and analyze algorithm implementation for security like Symmetric key algorithms and Asymmetric key algorithms.
C401.3	Students will be able to use basic cryptographic techniques in software and system design.
C401.4	The students will learn and understand Risk management in Information Security
C401.5	Students will have understanding of key concepts of cybercrime and computer forensics awareness will be developing among them
C401.6	Students will be able to use computer forensics tools

C402	**Machine Learning**
C402.1	To identify machine learning primitives to solve real world problems.
C402.2	To evaluate the performance of machine learning models.
C402.3	To build a linear machine learning model and perform generalization.
C402.4	To develop logic based and algebraic models for supervised, unsupervised learning problems.
C402.5	To construct generative and discriminative probabilistic models.
C402.6	To build a model using reinforcement and deep learning for complex machine learning problems.

C403	**Software Modeling and Design**
C403.1	Explore the concept of object oriented Modeling & Designing.
C403.2	Draw the use case &domain/class diagrams.
C403.3	Design the behavior modeling for a given problem.
C403.4	Explore the designing process of business, access and view layer class.
C403.5	Illustrate the different GRASP principles and GoF design patterns of Modeling.

C403.6	Apply different architectural design principles and guidelines in the real time application development.

C404	**Elective – I**
C404.1	Design Decision support systems for generating innovative business solutions.
C404.2	Evaluate business processes with business intelligence (Understand the competitive landscape of BI platforms, OLAP, OLTP).
C404.3	Describe the impact of information visualization and dashboards on business intelligence.
C404.4	Illustrate the use of BI for Business Performance Management (BPM) to capture organizational intelligence.
C404.5	Employ Business Intelligence in various business areas.
C404.6	Evaluate the success of Business Intelligence using Maturity model.

C405	**Elective –II**
C405.1	Explain the concept of Internet of Things.
C405.2	Illustrate key technologies, network architecture, protocols and standards in Internet of Things.
C405.3	Describe the objects connected in IoT
C405.4	Understand the underlying Technologies.
C405.5	Pointing out the platforms in IoT
C405.6	Integrating cloud technology with IoT

C406	**Computer Laboratory-VII**
C406.1	To implement number theory, asymmetric cryptographic and hash algorithm.
C406.2	Ability to demonstrate and use network intrusion detection and web security tools
C406.3	To identify and study machine learning tool such as WEKA, R, Python
C406.4	Design and implement regression analysis and dimensionality reduction problem using R programming.
C406.5	Design and implement python program for K-Means unsupervised learning algorithm and nonlinear modeling using kernel method.
C406.6	Evaluate probabilistic machine learning model using WEKA.

C407	**Computer Laboratory-VIII**
C407.1	Draw Structural diagrams for given hypothetical System.
C407.2	Draw Behavioral diagrams for given hypothetical System.

C407.3	Refine given design models using GRASP & GOF Patterns.

C408	**Project Phase-I**
C408.1	To study independently in chosen domain of project and programming language
C408.2	Apply knowledge to variety of real time project scenarios
C408.3	To function effectively as team to accomplish desired goal
C408.4	To understand different issues (documentation, presentation and implementation) and

C409	**Audit course V**
C409.1	Discover how to manage your emotions, and positively influence yourself and others**.**
C409.2	Build more effective relationships with people at work and at home.
C409.3	Increase your leadership effectiveness by creating an atmosphere that engages others.

FINAL YEAR COURSE OUTCOME
AY 2019-20
SEMESTER – II

C410	**Distributed Computing System**
C410.1	Explore the architectures of distributed systems.
C410.2	Use distributed systems algorithms in problem solving.
C410.3	Illustrate working components and fault tolerance of distributed systems
C410.4	Explore Distributed and Multimedia file system
C410.5	Examine Distributed web based system
C410.6	Identify Security challenges for distributed environment

C411	**Ubiquitous Computing**
C411.1	To demonstrate the design knowledge of Ubiquitous Computing and its applications.
C411.2	To analyze and explore smart devices and services used in Ubiquitous Computing.
C411.3	Identify the significance of actuators and controllers in real time application design.
C411.4	Apply and use the concept of HCI to comprehend the design of automation applications.
C411.5	Evaluating Ubiquitous Computing privacy and identifying the challenges associated with Ubiquitous Computing privacy.
C411.6	Recognize knowledge of ubiquitous and service oriented networks along with Ubiquitous Computing management.

C412	**Elective-III**
C412.1	Explore basics concept of Social Media Analytics.
C412.2	Evaluate the significance of Data mining in Social media Analytics.
C412.3	Illustrate the algorithms of text mining.
C412.4	Solve Problems on Social Media Analytics using Network Measure.
C412.5	Examine behavior Analytics for social media data.
C412.6	Apply social media analytics for different Applications.

C413	**Elective-IV**
C413.1	Explore the basics concept of Social Media Analytics.
C413.2	Evaluate the significance of Data mining in Social media Analytics.

C413.3	Illustrate the algorithms of text mining.
C413.4	Solve Problems on Social Media Analytics using Network Measure.
C413.5	Examine behavior Analytics for social media data.
C413.6	Apply social media analytics for different Applications.

C414	**Computer Laboratory-IX**
C414.1	Demonstrate core concepts and techniques in distributed systems.
C414.2	Apply principles distributed systems in practical application.
C414.3	Build application programs on distributed systems.

C415	**Computer Laboratory-X**
C415.1	Understand the android development environment
C415.2	Design user interface and control components of android application
C415.3	To create database for an android application and its manipulation
C415.4	To develop an android application for Electronic appliances control, location finding
C415.5	To design and develop the ubiquitous application and evaluate its performance
C415.6	Analyze the evolution of mobile cellular network

C416	**Project Work**
C416.1	Learn teamwork
C416.2	Able to know about Implementation phase.
C416.3	Able to apply various testing methods and tools
C416.4	To Understand the importance of documentation & presentation

C417	**Audit course VI**
C417.1	Understand and discuss what cognitive computing is, and how it differs from traditional approaches.
C417.2	Plan and use the primary tools associated with cognitive computing.
C417.3	Plan and execute a project that leverages cognitive computing.
C417.4	Understand and discuss the business implications of cognitive computing.