

RDBMS Concept & Oracle
MCS-301[T]

UNIT-I

Relational model- storage organizations for relations. Relations, relational algebra, relational calculus, functional dependencies,, multivalued dependencies, and normalization, relational query language functional dependencies, good & bad decomposition, anomalies as a database: a consequences of bad design, universal relation, normalization: 1NF, 2NF, 3NF, BCNF, 4NF, 5NF relational, algebra, structured query language (SQL), using MS access, implementing SQL functions integrity indexing, view using MS access.

UNIT-II

Degree of data abstraction, the database life cycle (DBLC): Initial study of the database study of the database, database design, implementation and lading, testing and evaluation operation maintain ACE Evaluation.

UNIT-III

Centralized Verses decentralized Design, What is A transaction? Concurrency control (locking Methods, Time stamping method .optimistic method) DDBMS (Distributed database management System) Advantage and Disadvantage .Homogeneous and heterogeneous DBMS, Distributed database transparency Features. Level of Data and Process Distribution: SPSD (Single site Processing .Single site Data), MPSD (Multiple site processing, single site data) MPMD (Multiple site processing, multiple site data)

UNIT-IV

System, client / server: Architecture and Implementation issues, client /Server system, what is client/servers? The forces that Drive client/ server.

UNIT-V

(DSS) Decision Support system: Operational data vs. decision support Data, The DSS Database Requirements. The data warehouse: The evaluation of data warehouse, rules for data warehouse. Online analytical processing (OLAP) OLAP architecture relational, OLAP and and comparison, data mining.

REFERENCE BOOKS:

1. An introduction to Database system (sixth edition) by c.j.Date
2. Database system (3rd edition) Galgotiya publication (p) Ltd, by Peter rob garlos coronel
3. An introduction to database systems by Bipin C.Desai

Multimedia Tools and Applications

MCS-302[T]

UNIT-I

Multimedia: needs and areas of use, development platforms to multimedia-DOS, windows, Linux identifying multimedia elements-text images, sound Animation and video, making simple multimedia with PowerPoint.

TEXT: concepts of plain & formatted text, RTF & HTML text using common text preparation tools, conversion to and from various text formats, using standard software. Objects linking and embedding concepts, basics of font design, overview of some to editing and designing tools, understanding & using various tools effects.

UNIT-II

importance of graphics in multimedia, vector and graphics, images capturing methods - scanner, digital camera and various attributes of images- size , color depth etc. Various important file format- BMP, DIB, EPS, CIF, PEX, PIC, JPG, TGA, PNG, TIF format- their features and limitations, graphics file form conversions, processing images with common software tools such as photo shop, paint shop pro, coral draw etc. Effect in multimedia, analog v/s digital sound. Basics of digital sounds-sampling. Frequency sound Dolby channels sound on PC, sound standards on PC, capturing editing sound on PC, overview and using someone sound record editing software. Overview of various sound file formats on WAV, MP3, MP4, Ogg, Vorbise etc.

Animation basics of animation, principle and use of animation multimedia, effects of resolutions, pixel depth, images size on quality and storage. Overview of 2-D and 3-D animation techniques software -animation pro, 3D studio & paint shop pro animation. Animation some web - features and limitations, creating simple animations for the web using GIF Animator and flash.

UNIT-III

Video basics of video- analog and digital video. How to use video on PC. Introduction to graphics acceleration cards, Direct X introduction to OAV/DV and IEEE1394 cards, digitization of analog video to digital video. Interlacing and non-interlacing, brief note on various video standards-NTSC, PAL, SECAM, HDIV, introduction to video capturing media & instrument- video disk DVCAM, camcorder, introduction to digital video compression techniques and various file formats-AVI, MPEG, MOVE Real video.

Brief introduction to video editing and movie making tools-quick time video for windows and adobe premier.

UNIT-IV

Authoring tools for CD based multimedia, types of multimedia authoring tools key factor of selecting CD based multimedia authoring tools planning and distribution of a multimedia projects multimedia development team & skills reequipments, stages in designing & producing multimedia products for CD. Testing of product, distribution of multimedia product, various formats of CD and DVDs.

UNIT-V

Multimedia on the web, Bandwidth relationship, broadband technologies, text on the web- dynamic and embedded from technology , Audio on the web- real audio and MP3, MP4 , audio support in HTML graphics -HTML safe color palate, interlaced and non interlaced model, graphics support in HTML, image map video on web-streaming video, real video, MPEG and viral reality on the web.

Software Engineering
MCS-303[T]

UNIT-I

The software problem, software engineering problem, software engineering approach-phased development process, project management and matrices. Software processes - processes, projects, components, characteristics. Software development process - process step specification, waterfall model, prototyping, iterative enhancement, spiral model.

UNIT-II

Software Requirement analysis and specification- software requirements, problem analysis, requirement specification, validation, metrics.

UNIT-III

Planning a software project - cost estimation, project scheduling, staffing and personnel planning, software configuration management plans, quality assurance plans, project monitoring plans, risk management.

UNIT-IV

Software design - design principles, module level concepts, design notation and specification, structure design methodology, verification, coding - programming practice, verification and metrics.

UNIT-V

Software Testing: Testing fundamentals, functional testing, structural testing, testing process.

Software quality Assurance (SQA): Software reviews, software quality factor, SQA activities, formal technical reviews. SQA approach software configuration management -configuration identification, change control , status Accounting and auditing.

Advanced JAVA Programming MCS-304[T]

UNIT-I

Java Basic Review: Java streaming-networking - event handling - multi heading - byte code interpretation - customizing application- data structures- collection classes.

UNIT-II

Distribution computing: Custom sockets - remote method invocation - activation - object serialization - distributed garbage - collection - RMI - HOP - interface definition language - CORBA - JINI overview.

UNIT-III

Java Beans and Swing: Bean concepts - events in bean box - bean customization - persistence - application - deployment using swing - advanced swing techniques - JAR file handling.

UNIT-IV

Java Enterprise applications Jni - Services - java server pages - JDBC - session beans - entity beans - programming and deploying enterprise java beans - java transactions
RELATED JAVA TECHNIQUES.

UNIT-V

Graphics java media frame work - 3 D graphics - internationalization case study - deploying application, E-commerce applications.

REFERENCE BOOKS:

Deitel & Deitel "Java how to program" Prentice Hall. 4th edition 2000.

Gary Cornell and Cay S. Horstmann. "Java Vol 1 and vol 2" Sun Microsystems Press, 1999.

Stephen Asbury, Scott R. Weiner, "Developing Java Enterprise Application" 1998.