



Practical course based on BS12001 and BS12002
Problem Solving using Computer and 'C' programming and Database management
system
[CORE COURSE]

Semester – I	Credits: 1.5	Subject Code: BSP12009	Lectures: 40
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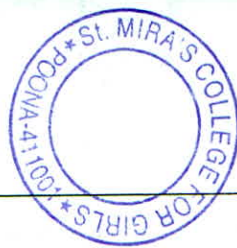
Course Outcomes:
<p>At the end of this course, the learner will be able to:</p> <ul style="list-style-type: none"> • Recognize the program development life cycle. • Solve simple computational problems using modular design and basic features of the 'C' language. • Solve real world computational problems. • Describe basic query processing operations. Design E-R Model for given requirements and convert the same into database tables. • Evaluate operations on database management systems • Practice the basic query processing operations.

Unit 1: Problem Solving using Computer and 'C' programming(Section A)	20
<ul style="list-style-type: none"> • Assignment 1: Introduction to Linux Operating system (Commands, Editor) Demonstration of C-programming setup, Postgresql Setup • Assignment 2: Problem Solving using Pseudocode and Flowchart, Simple programs, Understanding errors and error handling using debugger. • Assignment 3: Decision Making Control Structures. • Assignment 4: Loop Control Structures • Assignment 5: Functions (User Defined functions, Library functions), Recursion 	




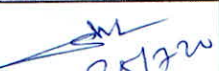
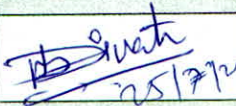
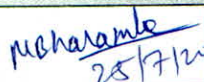
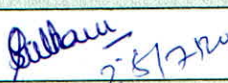

Course Outcomes:
<p>At the end of this course, the learner will be able to:</p> <ul style="list-style-type: none"> • Solve real world computational problems. • Evaluate operations on relational database management systems. • Understand basic query processing operations. Design E-R Model for given requirements and convert the same into database tables. • Understand constraints, views, triggers, and functions in databases

Unit 2: Practical Course on Database Management Systems (Section B)	20
<ul style="list-style-type: none"> • Assignment 1: To create simple tables with only the primary key constraint (as a table level constraint & as a field level constraint) (include all data types) and referential integrity constraint, PK constraint. • Assignment 2: To create one or more tables with following constraints, (Check constraint, Unique constraint, Not null constraint) and simple DDL and DML statements such as drop table, alter table, insert / update / delete records using tables created in previous assignments. (use simple forms of insert / update / delete 	

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statements) • Assignment 3: To query the tables using simple form of select statement Select from table [where order by] Select from table [where group by <> having <> order by <>] • Assignment 4: To query tables using nested queries (use of 'Except', exists, not exists, all clauses, join) • Assignment 5: To create views	
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