



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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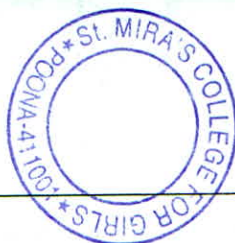
Course Outcomes:
At the end of this course, the learner will be able to: <ul style="list-style-type: none">• Recognize the program development life cycle.• Solve simple computational problems using modular design and basic features of the ‘C’ language.• Solve real world computational problems.• Describe 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	





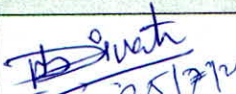
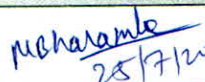
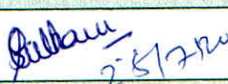

Course Outcomes:
At the end of this course, the learner will be able to: <ul style="list-style-type: none">• Solve real world computational problems.• Evaluate operations on relational database management systems.• Understand basic query processing operations. Design E-R Model for given requirements 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)	
<ul style="list-style-type: none"> • 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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