



**SARVAJANIK UNIVERSITY**  
**Sarvajani College of Engineering and Technology**  
**Master of Computer Applications**



**Integrated MCA I Semester 2**

**Subject Name:** Software Project in C/C++

**Subject Code:** IMCA16212

**Type of course:** Project

**Prerequisite (if any):** Programming knowledge of C/C++ Language

**List of Courses where this course will be prerequisite:** Data Structures

**Rationale:** Knowledge of this course will be used to develop software applications.

**Teaching and Examination Scheme:**

TEACHING SCHEME				Theory Marks		Practical Marks		Total
L	T	P	C	TEE	CAT	TEP	CAP	
0	0	2	1	-	-	30	20	50

**CAT:** Continuous Assessment Theory comprised of CA1 and CA2 **CA1:** Continuous Assessment (assignments/projects/open book tests/closed book tests **CA2:** Sincerity in attending classes/class tests/ timely submissions of assignments/self-learning attitude/solving advanced problems **TEE:** Term End Examination **TEP:** Term End Practical Exam (Performance and viva on practical skills learned in course) **CAP:** Regular submission of Lab work/Quality of work submitted/Active participation in lab sessions/viva on practical skills learned in courses.

**Guidelines:**

- It is recommended that the team should be of 2-3 students.
- The project should be free from plagiarism of any kind.
- Project must have proper documentation.
- Students can develop projects in C or C++ either on Windows or Linux Platform.
- Coding standards should be followed meticulously. At the minimum, the code should be self-documented, modular, and should use meaningful naming conventions.
- Students may be asked to write the code related to the project during examination. Project size in terms of Lines of Code (LOC) should be 1,000 lines or more. In case of (extensive) recursion used in medium to high complexity problem, this limit on LOC may be relaxed.





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**Guidelines for Documentation:**

- Documentation of the project should include at least description of the problem, algorithm, Source code and screenshots.
- **Format:** The student has to submit hard copy of the Project report in below specified format:
  - Print out should be taken on both sides of the page with single line spacing.
  - Use Times New Roman of size 11 for normal text.
- **A typical Table of content will be as follows.**

<b>Table of Content</b>	
1	Acknowledgements
2	Abstract
3	Objective
4	Source Code
5	Screenshots
6	Test cases
7	References





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**Reference Books:**

Sr. no.	Title of book /article	Author(s)	Publisher and details like ISBN	Year of publication	Publication Edition
1	Programming in C	Ashok M. Kamthane	Pearson	2006	5th edition
2	Programming in C	Reema Thareja	Oxford University Press	2015	2nd edition
3	Let us C	Yashavant Kanetkar	BPB Publications ISBN: 978-8183331630	2016	15th edition
4	Object Oriented Programming with C++	E Balagurusamy	McGraw Hill Education ISBN: 978-1-25-902993-6	2013	6th edition
5	C: How to Program with an introduction to C++	Paul Deitel Harvey Deitel	Pearson ISBN: 978-93-530-6282-8	2018	8th edition
6	Teach Yourself C++	Herbert Schildt	Tata McGraw Hill ISBN: 0-07-463333-3	2007	3rd edition
7	Object Oriented Programming in C++	Robert Lafore	Galgotia publication pvt ltd. Pearson Education ISBN: 978-81-317-2282-4	2022	4th edition





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**Course Outcomes:**

<b>Sr. No.</b>	<b>CO Statement</b> <b>After learning this subject, students will be able to</b>	<b>Marks % weightage</b>
CO-1	Demonstrate a sound technical knowledge of their selected project topic	20%
CO-2	Identify and formulate the problem definition	20%
CO-3	Analyze the problem definition and develop the project using appropriate programming	20%
CO-4	Compare and test the several existing solutions.	20%
CO-5	Demonstrate an ability to work in teams.	10%
CO-6	To report and present the findings of the study conducted in the preferred domain.	10%





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**Mapping with POs:**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13
<b>CO-1</b>	1	3	3	3	3	0	1	2	1	2	3	3	0
<b>CO-2</b>	1	3	3	3	3	1	1	2	1	2	3	3	0
<b>CO-3</b>	0	3	3	3	3	1	1	2	2	2	3	3	0
<b>CO-4</b>	2	3	3	3	3	0	1	2	2	2	3	3	0
<b>CO-5</b>	0	1	3	3	3	1	1	2	3	2	3	3	0
<b>CO-6</b>	1	3	3	3	3	0	1	2	2	2	3	3	0
<b>Rationale*</b>													

**Rationale\*:** Explaining why it is matching this particular program outcome

