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Note: Remove "Table of Content" before including in CP Book

17ISL68: FILE STRUCTURES LABORATORY

A. LABORATORY INFORMATION

1. Lab Overview

Degree:	BE	Program:	IS
Year / Semester :	3/6	Academic Year:	2018-19
Course Title:	FILE STRUCTURES LABORATORY	Course Code:	17ISL68
Credit / L-T-P:	3/01+02	SEE Duration:	3Hrs
Total Contact Hours:	40 Hrs	SEE Marks:	60 Marks
CIA Marks:	40	Assignment	_
Course Plan Author:	Tejashwini N	Sign	Dt :
Checked By:	Manjula K	Sign	Dt :

2. Lab Content

Unit	Title of the Experiments	Lab Hours	Concept	Blooms Level
1.	Write a C++ program to read series of names, one per line, from	3		
	standard input and write these names spelled in reverse order to			

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A	A C A II		

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	the standard output using I/O redirection and pipes. Repeat the ex-		
	ercise using an input file specified by the user instead of the standard input and using an output file specified by the user instead of		
	the standard output.		
2.	Write a C++ program to read and write student objects with fixed	3	
	length records and the fields delimited by " ". Implement pack (),	3	
	unpack (), modify () and search () methods.		
3.	Write a C++ program to read and write student objects with Variable	3	
] .	- Length records using any suitable record structure. Implement	5	
	pack (), unpack (), modify () and search () methods.		
4	Write a C++ program to write student objects with Variable - Length	3	L4
	records using any suitable record structure and to read from this file		Analyze
	a student record using RRN.		
5	Write a C++ program to implement simple index on primary key for a	3	L4
	file of student objects. Implement add (), search (), delete () using		Analyze
	the index.		
6	Write a C++ program to implement index on secondary key, the	3	L3
	name, for a file of student objects. Implement add (), search (),		Apply
	delete () using the secondary index.		
7	Write a C++ program to read two lists of names and then match the	3	L3
	names in the two lists using Co Sequential Match based on a single		Apply
8	loop. Output the names common to both the lists. Write a C++ program to read k Lists of names and merge them using	3	L3
	k-way merge algorithm with k = 8.	3	Apply
	K-way merge algorithm with k - 0.		Дри
	Part – B		
	Pail - D		
00	Student should develop mini Project on the tenics mentioned be	2	L6
09	Student should develop mini Project on the topics mentioned below or similar applications Document processing, transaction man-	3	LO
	agement, indexing and hashing, buffer management, configuration		
	management. Not limited to these.		
	management for timited to those.		

3. Lab Material

Unit	Details	Available
1	Text books	
	Michael J. Folk, Bill Zoellick, Greg Riccardi: File Structures-An Object Oriented Approach with C++, 3rd Edition, Pearson Education, 1998	In Lib
		In Lib
2	Reference books	
a.	K.R. Venugopal, K.G. Srinivas, P.M. Krishnaraj: File Structures Using C++, Tata McGraw-Hill, 2008.	In Lib
b.	Scot Robert Ladd: C++ Components and Algorithms, BPB Publications, 1993.	In Lib
C.	Raghu Ramakrishan and Johannes Gehrke: Database Management Systems, 3 rd Edition, McGraw Hill, 2003.	In Lib

4. Lab Prerequisites:

-	-	Base Course:		_	-
SNo	Course	Course Name	Topic / Description	Sem	Remarks
	Code		·		
1	17CS32	Data Structures and	Tree, B Tree, B+ Trees	3	Required for Ex-
		Applications			periment 6,7,8,9

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2 15CS	45 Object	Oriented A Review of structures, Procedure-Ori- 4	
	Concep	ented Programming system, Object Oriented Programming System, Console I/O, variables and reference variables, Function Prototyping, Function Overloading. Class and Objects Introduction, member functions and data, objects and functions, objects and arrays.	Required for Experiment 1,2,3,4

objects and arrays,

Note: If prerequisites are not taught earlier, GAP in curriculum needs to be addressed. Include in Remarks and implement in B.5.

5. General Instructions

SNo	Instructions	Remarks
1	Observation book and Lab record are compulsory.	
2	Students should report to the concerned lab as per the time table.	
	After completion of the program, certification of the concerned staff incharge in the observation book is necessary.	
	Student should bring a notebook of 100 pages and should enter the readings /observations into the notebook while performing the experiment.	
	The record of observations along with the detailed experimental procedure of the experiment in the Immediate last session should be submitted and certified staff member in-charge.	
6	Should attempt all problems / assignments given in the list session wise.	
	It is responsibility to create a separate directory to store all the programs, so that nobody else can read or copy.	
8	When the experiment is completed, student should save the experiment with relevant filenames and exit from the Turbo C IDE compiler.	
	Any damage of the equipment of the computer system will be viewed seriously either by putting penalty or by dismissing the total group of students from the lab for the semester/year	
	Completed lab assignments should be submitted in the form of a Lab Record in which you have to write the algorithm, Flowchart, program code along with comments and output for various inputs given	

6. Lab Specific Instructions

SNo	Specific Instructions	Remarks
1	Start windows Operating system	
2	Open the Turbo C text editor screen in Windows	
3	Select new file	
4	Write the program	
5	Save the program with ". c" extension	
6	Compile the program using Alt + F9	
7	Press Ctrl + F9 to Run to execute the Program	
8	Press Alt+F5 to view the output of the program at the output screen	

B. OBE PARAMETERS

1. Lab / Course Outcomes

#	COs	Teach.	Concept	Instr	Assessment	Blooms'
		Hours		Method	Method	Level
1	Understanding the basic file operations	3	File opera-	Demon-	Viva & pre-	L2
	using c/c++		tions	strate	sentation	Under-
						stand-
						ing
2	Analyze fixed and variable length records	6	Record	Demon-	Viva & pre-	L ₄

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-	Total	40	-	-	-	-
			based			
			or graphical			
			menu based			
	based or graphical		on files with	strate	sentation	Creating
6	Design and Develop the Project by menu	16	Operations	Demon-	Viva & pre-	L6
						ing
			operations	strate	sentation	Analyz-
5	Analyzing the operations on multiple files	6	Multiple file	Demon-	Viva & pre-	L4
			key			ate
	based accessing of record		secondary	strate	sentation	Evalu-
	Comparing single and multiple index	6	Primary and	Demon-	Viva & pre-	L5
			ber			ate
	accessing by known index no		Record num-	strate	sentation	Evalu-
_	Compare the time taken in index based	3	Relative	Demon-	Viva & pre-	L5
						ing
	in the file		Structure	strate	sentation	Analyz-

Note: Identify a max of 2 Concepts per unit. Write 1 CO per concept.

2. Lab Applications

SNo	Application Area	CO	Level
1	Student Data Base	1	L2
2	Student Data Base	2	L4
3	Bank database	3	L5
4	Library Management	4	L5
5	Reservation System	5	L4
6	Student database, medical data base, reservation System, library management	6	L6

Note: Write 1 or 2 applications per CO.

3. Articulation Matrix

(CO - PO MAPPING)

_	Course Outcomes				Р	rogr	am (Dutc	ome	es				
#	COs	PO1	РО	РО	РО	РО	РО	РО	РО	РО	PO ₁	PO1	PO1	Level
			2	3	4	5	6	7	8	9	0	1	2	
_	Understanding the basic file oper- ations using c/c++				-		-	-	-	-	-	-		L2
15ISL68.2	Analyze fixed and variable length records in the file				-		-	-	-	-	-	-		L4
	Compare the time taken in index based accessing by known index no				-		-	-	-	-	-	-		L5
	Comparing single and multiple in- dex based accessing of record				-		-	-	-	-	-	-		L5
	Analyzing the operations on multi- ple files				-		-	-	-	-	-	-		L4
	Design and Develop the Project by menu based or graphical				-		-	-	-	_	-	_		L6

Note: Mention the mapping strength as 1, 2, or 3

4. Mapping Justification

Mapping	Justification	
		Mapping Level
CO PO	-	-

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CO ₁	PO1	Knowledge of Object Oriented Concepts is required to solve complex problems.	L6
	PO2	analyzing the problem requires the knowledge of Object Oriented Con-	L4
	DO-	cepts.	1.0
		design and develop a solution for a problem	L6
	PO4	No investigation & interpretation content. No mapping. Learning is at the	_
	DO-	basic level. Attainment will be Zero, if mapping done.	1.0
		requires the knowledge of Eclipse juno for program execution	L6
		No social, cultural issues. No mapping	-
		No impact on Environment and sustainability. No mapping	-
		No team work or lead for the ethical work. No mapping	-
		No team work or lead for the ethical work. No mapping	-
		No usage for communication. No mapping.	-
		No project management and finance. No mapping.	-
		Lifelong learning is required based on technology changes	L4
CO2	PO1	Knowledge of Divide and conquer concept is required to sort the elements.	L6
	D∩o	analyzing the problem requires the knowledge of Time Complexity	L4
		design and develop a solution for a complex problem	L6
		No investigation & interpretation content. No mapping. Learning is at the	LO
	PO4	basic level. Attainment will be Zero, if mapping done.	_
	P05	requires the knowledge of Eclipse juno for program execution	L6
		No social, cultural issues. No mapping	-
		No impact on Environment and sustainability. No mapping	_
		No team work or lead for the ethical work. No mapping	_
		No team work or lead for the ethical work. No mapping	_
		No usage for communication. No mapping.	_
		No project management and finance. No mapping.	_
		Lifelong learning is required based on technology changes	L4
CO ₃		Knowledge of Dynamic Programming is required to solve complex prob-	L6
CO3		lems	
	PO2	analyzing the problem requires the knowledge of Dynamic Programming	L4
		design and develop a solution for a complex problem	L6
	PO4	No investigation & interpretation content. No mapping. Learning is at the	-
		basic level. Attainment will be Zero, if mapping done.	
	PO5	requires the knowledge of Eclipse juno for program execution	L6
	P06	No social, cultural issues. No mapping	-
		No impact on Environment and sustainability. No mapping	-
	P08	No team work or lead for the ethical work. No mapping	-
	P09	No team work or lead for the ethical work. No mapping	-
	PO10	No usage for communication. No mapping.	-
		No project management and finance. No mapping.	-
		Lifelong learning is required based on technology changes	L4
CO ₄		Knowledge of Greedy concept is required to solve the complex prob-	L6
		lems	
	PO2	analyzing the problem requires the knowledge of Greedy concept.	L4
		design and develop a solution for a complex problem	L6
		No investigation & interpretation content. No mapping. Learning is at the	-
		basic level. Attainment will be Zero, if mapping done.	
	PO5	requires the knowledge of Eclipse juno for program execution	L6
		No social, cultural issues. No mapping	-
		No impact on Environment and sustainability. No mapping	-
		No team work or lead for the ethical work. No mapping	-
		No team work or lead for the ethical work. No mapping	-
		,	1

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			communication. No mapping.	-		
	PO11	No project ma	anagement and finance. No mapping.	-		
	PO12	Lifelong learn	ing is required based on technology changes	L4		
CO ₅	PO1	Knowledge o	f Backtracking is required to solve the complex problems.	L6		
	PO2	analyzing the	problem requires the knowledge of Backtracking.	L4		
	PO3	design and de	evelop a solution for a complex problem	L6		
			on & interpretation content. No mapping. Learning is at the	-		
		basic level. At	tainment will be Zero, if mapping done.			
	PO5	requires the k	nowledge of Eclipse juno for program execution	L6		
	P06	No social, cul	tural issues. No mapping	-		
	P07	No impact on	Environment and sustainability. No mapping	-		
	P08	No team wor	k or lead for the ethical work. No mapping	-		
	POg No team work or lead for the ethical work. No mapping			-		
	PO10 No usage for communication. No mapping.		-			
	PO11	-				
	PO11 No project management and finance. No mapping. PO12 Lifelong learning is required based on technology changes					

Note: Write justification for each CO-PO mapping.

5. Curricular Gap and Content

SNo	Gap Topic	Actions Planned	Schedule Planned	Resources Person	PO Mapping
1					
2					
3					
4					
5					

Note: Write Gap topics from A.4 and add others also.

6. Content Beyond Syllabus

SNo	Gap Topic	Actions Planned	Schedule Planned	Resources Person	PO Mapping
1	C++	Extra Classes			
2					
3					
4					
5					

Note: Anything not covered above is included here.

C. COURSE ASSESSMENT

1. Course Coverage

Unit	Title	Teach-		No. of question in Exam					CO	Levels	
		ing	CIA-1	CIA-2	CIA-3	Asg-1	Asg-2	Asg-3	SEE		
		Hours									
1	Write a C++ program to read series	3	1	-	1	-	-	-	1	15IS-	L2
	of names, one per line, from stan-									L68.1	
	dard input and write these names										
	spelled in reverse order to the										
	standard output using I/O redi-										
	rection and pipes. Repeat the exer-										
	cise using an input file specified by										
	the user instead of the standard in-										
	put and using an output file speci-										
	fied by the user instead of the										

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Соруп	standard output.										
2	Write a C++ program to read and write student objects with fixed length records and the fields delimited by " ". Implement pack (), unpack (), modify () and search () methods.		1	-	1	-	-	-	1	15IS- L68.2	L4
3	Write a C++ program to read and write student objects with Variable - Length records using any suitable record structure. Implement pack (), unpack (), modify () and search () methods.		1	-	1	-	-	-	1	15IS- L68.2	L4
4	Write a C++ program to write student objects with Variable - Length records using any suitable record structure and to read from this file a student record using RRN.		1	-	1	-	-	-	1	15 S- L68.3	L5
5	Write a C++ program to implement simple index on primary key for a file of student objects. Implement add (), search (), delete () using the index.	_	_	1	1	-	_	-	1	15IS- L68.4	L5
6	Write a C++ program to implement index on secondary key, the name, for a file of student objects. Implement add (), search (), delete () using the secondary index.		-	1	1					15IS- L68.4	L6
7	Write a C++ program to read two lists of names and then match the names in the two lists using Co Sequential Match based on a single loop. Output the names common to both the lists.		-	1	1	-	-	-	1	15IS- L68.5	L4
8	Write a C++ program to read k Lists of names and merge them using k-way merge algorithm with k = 8.		_	1	1	_	_	_	1	15IS- L68.5	L4
9	Project	16							1	15IS- L68.6	L6
					1				1		
1		1	1	1	1	1	1	1	1	1	

Total Note: Write CO based on the theory course.

2. Continuous Internal Assessment (CIA)

Evaluation	Weightage in Marks	CO	Levels
CIA Exam – 1	20	CO1,CO2,CO3	L2,L3,L4
CIA Exam – 2	20	CO4,CO5,	L4,L5
CIA Exam – 3	20	CO1,CO2,CO3,CO4,CO5,C	L3,L4,L6
		06	
Assignment - 1	-	-	-
Assignment - 2	-	-	-
Assignment - 3	-	-	-
	-	-	-
Seminar - 1	-	-	-

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L6

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Seminar - 2		_	-	-			
Seminar - 3		-	-	-			
		-	-	-			
Other Activities - define -		-	-	-			
Slip test							
Final C	CIA Marks	20	-	-			

SNo	Description	Marks
1	Observation and Weekly Laboratory Activities	04 Marks
2	Record Writing / Viva	o8 Marks for each Expt
3	Internal Exam Assessment	o8Marks
4	Internal Assessment	20 Marks
5	SEE	80Marks
-	Total	100 Marks

D. EXPERIMENTS

Experiment 1:

-	Experiment No.:	1	Marks		Date Planned		Date Con- ducted	
1		and wr O redii the use	Write a C++ program to read series of names, one per line, from standard input and write these names spelled in reverse order to the standard output using I/O redirection and pipes. Repeat the exercise using an input file specified by the user instead of the standard input and using an output file specified by the user instead of the standard output.					
	Course Outcomes							
	Aim			the basic cor	icepts on file	operations		
4	Material / Equipment Required	Lab Ma	Lab Manual					
	Principle, Concept	Object oriented Concepts						
	Procedure, Program, Activity, Algorithm, Pseudo Code	•	Step 3. Step 4. Step 5. order	Start take a string write the co Read the co Write the co to another fil display the co	ntents of the ntents of the ntents of the e "f2"	e file in the re	everse order are read in th	
	Block, Circuit, Model Diagram, Reaction Equation, Expected Graph		-					
	Observation Table, Look-up Table, Out- put							
	Sample Calculations		-					
	Graphs, Outputs		-					
11	Results & Analysis	• Enter 1		ne no. of nan priya	nes to be ent	ered		

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			The name in reverse order	ayirp	
			Enter name padma		
			The name in reverse order	amdap	
			Enter name ajit		
			The name in reverse order	tija	
			Enter name sohan		
			The name in reverse order	nahos	
			Enter name dilip		
			The name in reverse order	pilid	
			•		
12	Applica	tion Areas	Computer Science		
13	Remark		-		
14	Faculty	-	-		
	with Da	te			

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Experiment 2:

	Francisco cont No.		Mayles		Data		Data Can	
-	Experiment No.:	2	Marks		Date		Date Con-	
	T:+1 a	***	<u> </u>		Planned	. 1 . 1	ducted	° 11 .1
1	Title	I	-	-			•	fixed length
						nplement pa	ick (), unpa	ck (), mod-
		ify () and search	() methods	•			
2	Course Outcomes							
3	Aim				a buffer, wri	te the conter	nts to the bu	ffer and read
			ontents from	the buffer				
	Material / Equip-	Lab N	⁄Ianual					
	ment Required							
		Obje	ct oriented C	oncepts				
	Principle, Concept							
			1 : Start					
	gram, Activity, Al-							
				contents fro	om the keyb	oara ana w	rite the con	tents to the
	Code		r(pack)	ants of the bu	uffer to the fil	0		
			•		ne file back to		nnack)	
					om the back to			
7	Block, Circuit,	<u> </u>	o. Display till	o correcties in		011 to the 50	10011	
	Model Diagram,							
	Reaction Equation,							
	Expected Graph							
8	Observation Table,	0: Exi	t					
	Look-up Table,	1· writ	te.					
		2: Dis						
		2: Disj						
		3. IVIO 4: Sea	-					
			-	1				
			your choice	1				
			the student nan					
		Enter 1	the student US	N 1bg09is0	015			

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Copyright ©2017. cAAS. All rights reser	Enter the student branch Ise	
	0: Exit	
	1: write	
	2: Display	
	3: Modify	
	4: Search	
	Enter your choice 1	
	Enter the student name Dhanvi	
	Enter the student USN 1bg09is007	
	Enter the student branch Ise	
	0: Exit	
	1: write	
	2: Display	
	3: Modify	
	4: Search	
	Enter your choice 2	.
	Name USN	Branch
	Karthik 1 bg 0 9 is 0 1 5	I s e
	D h a n v i	
	1 b g 0 9 i s 0 0 7 I s e	
	0: Exit	
	1: write	
	2: Display	
	3: Modify	
	4: Search	
	Enter your choice 3	
	Enter the USN to Modify	
	1bg09is007	
	Record found	
	The old values of the record with usn 1bg09is007 are	
	USN=1bg09is007	
	Name=Dhanvi	
	Branch=ise	
	Enter new values	
	Name=dhruva	
	USN=1bg09is023	
	Branch=ise	
	Record modified	
	0: Exit	
	1: write	
	2: Display	
	3: Modify	
	4: Search	
	Enter your choice 4	
	Enter the usn to search	

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		1bg09is023
		Record found
		Dhruva
		1bg09is023
		Ise
		0: Exit 1: write 2: Display 3: Modify 4: Search Enter your choice 0 Output from text file
		karthik 1bg09is015 ise dhruva 1bg09is023 ise
	Sample Calcula- tions	
	Graphs, Outputs	
	Results & Analysis	
	Application Areas	
_	Remarks	
	Faculty Signature with Date	

Experiment 3:

-	Experiment No.:	3	Marks		Date	Date Con-
					Planned	ducted
1	Title	Write	a C++ progr	ram to read	and write stu	udent objects with Variable - Length
					ord structure	. Implement pack (), unpack (), mod-
		ify()	and search () methods.		
2	Course Outcomes					
3	Aim	1		derstand wh	at is variable	length record and its advantages and
			Ivantages			
4	Material / Equip-	Lab N	Manual			
	ment Required	01.1.		· · · · · · · · · · · · · · · · · · ·		
5	Theory, Formula,	Obje	ct Oriented C	oncepts		
_	Principle, Concept		. 61 1			
6			1 : Start			
	gram, Activity, Al-					
			3: read the r(pack)	contents fro	om the keyb	poard and write the contents to the
		Step	4: write cor			e file with the delimeter after each
		1		ish the recor		the levefor war early wat it the deliver
					ne lite back to	o the buffer(unpack), until the delime-
		ter (record by record) step 6: Display the contents from the buffer on to the screen				
		step	o. Display the	e contents m	on the buller	on to the screen
7	Block, Circuit,					
	Model Diagram,					
	Reaction Equation,	1				

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Copyright ©2017. cAAS. All rights reserved. Expected Graph 8 Observation Table, 0: Exit Table 1: write Look-up Output 2: Display 3: Modify 4: Search Enter your choice 1 Karthik Enter the student name Enter the student USN 1bg09is015 Enter the student branch Ise 0: Exit 1: write 2: Display 3: Modify 4: Search Enter your choice 1 Enter the student name Dhanvi Enter the student USN 1bg09is007 Enter the student branch Ise 0: Exit 1: write 2: Display 3: Modify 4: Search Enter your choice Name **USN** Branch Karthik 1 b g 0 9 i s 0 1 5 I s e D i h a n 9 i 0 0 b 0 S 7 I 0: Exit 1: write 2: Display 3: Modify 4: Search Enter your choice 3 Enter the USN to Modify 1bg09is007 Record found The old values of the record with usn 1bg09is007 are USN=1bg09is007 Name=Dhanvi Branch=ise Enter new values Name=dhruva USN=1bg09is023 Branch=ise

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Experiment 4:

-	Experiment No.:	4	Marks		Date Planned		Date Con- ducted	
1	Title	Write a C++ program to write student objects with Variable - Length rusing any suitable record structure and to read from this file a student using RRN.				_		
	Course Outcomes							
	Aim							
	Material / Equip- ment Required		1anual					
	Theory, Formula, Principle, Concept							
	Procedure, Pro-							
	gram, Activity, Al-			eclare a string			ffer)	
	gorithm, Pseudo			ad the conter			æ.	
	Code	4.	•	d the serial n rite the conte			ouπer	
		5. 6.	, -	rite contents			with the de	limeter after
		0,		rd to distingu			with the de	uneter arter
		7.		ead the cont			rial no (RRN)	back to the
		,		ack), until the				
		8.	step 8: Dis	splay the con	tents from th	e buffer on t	o the scree	
	Block, Circuit,							
	Model Diagram,							
	Reaction Equation,							
	Expected Graph	0.114						
8	Observation Table,	0#kai	rthik 1bg09i	s015 1se				
	Ουτρατ	1#dh:	ruva 1bg09i	s023 ise				
	Sample Calcula-							
	tions							
	Graphs, Outputs							
	Results & Analysis							
	Application Areas							
	Remarks							
	Faculty Signature							
	with Date							

Experiment 5:

-	Experiment No.:	5	Marks	Date	Date Con-	
				Planned	ducted	

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	Title	Write a C++ program to implement simple index on primary key for a file of stu
		dent objects. Implement add (), search (), delete () using the index.
2	Course Outcomes	
3	Aim	
4	Material / Equip-	Lab Manual
	ment Required	
5	Theory, Formula,	
	Principle, Concept	
6	Procedure, Pro-	1. Step 1 : Start
	gram, Activity, Al-	
	gorithm, Pseudo	, ,
	Code	 Step 4: create 2 files separately, one file for the records(data) and 2nd fil for the Primary key and the index to the data file
		5. Step 5. write the primary key no for each record in to index file and th
		data in the second file
		6. step 6 : write the contents to the buffer (pack)
		7. Step 7: write contents of the buffer to the main file with the delimiter at
		ter each record to distinguish the records
		8. Step 8 : read the contents of the file using primary key in one file ,writ
		the contents relevant from the data file back to the buffer(unpack), unt
		the delimiter (record by record)
		g. step g: Display the contents from the buffer on to the screen
	Block, Circuit,	
	Model Diagram,	
	Reaction Equation,	
	Expected Graph	Civa unique numbers to the records
	Look-up Table,	Give unique numbers to the records
1	Output	
	σαιραί	In a file
		So records identified by urn
		University register number
	Sample Calcula-	
	Sample Calcula- tions	
	Graphs, Outputs	
10	ωιαρτίο, Φαίραιο	
11	Results & Analysis	
	Application Areas	
_	Remarks	
	Faculty Signature	
	with Date	
	•	

Experiment 6:

-	Experiment No.:	6	Marks		Date		Date Con-	
					Planned		ducted	
1								e, for a file of
		stude	ent objects. I	mplement a	dd (), search	(), delete () using the se	econdary in-
		dex.						
2	Course Outcomes							
3	Aim							
4	Material / Equip-	Lab N	Manual					
	ment Required							

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5	Theory, Formula,	
	Principle, Concept	
	Procedure, Program, Activity, Algorithm, Pseudo Code	Step 1: Start Step 2: declare a string array (to make it is a buffer) Step 3: read the contents from the keyboard Step 4: create 3 files separately, one file for the records(data) and 2 nd file for the Primary key and the index to the data file and 3 rd file for the secondary file Step 5. write the primary key no for each record in to index file and the data in the second file and the secondary index to the 3 rd file step 6: write the contents to the buffer (pack) Step 7: write contents of the buffer to the main file with the delimiter after each record to distinguish the records Step 8: read the contents of the file using primary key in one file ,write the contents relevant from the data file back to the buffer(unpack), until the delimiter (record by record) step 9: Display the contents from the buffer on to the scree
	Block, Circuit, Model Diagram, Reaction Equation, Expected Graph	
8	Observation Table, Look-up Table, Output	
_	Sample Calcula- tions	
10	Graphs, Outputs	
11	Results & Analysis	
		Image Processing
	Remarks	
	Faculty Signature with Date	

Experiment 7:

-	Experiment No.:	7	Marks	8	Date		Date Con-	
					Planned		ducted	
1	Title	Write	a C++ progra	ım to read tw	vo lists of nar	nes and ther	n match the r	names in the
		two lists using Cosequential Match based on a single loop. Output the names						
		comr	non to both t	he lists.				
2	Course Outcomes							
3	Aim							
4	Material / Equip-	Lab N	⁄lanual					
	ment Required							
5	Theory, Formula,							
	Principle, Concept							
6	Procedure, Pro-	Step	1: start					
	gram, Activity, Al-	Step	2: create 2 file	es seperately	/			
					es in to 2 diffe			
	Code				ch the name	s in the 2 file	es and it wil	l display the
		name	es which are o	common				
		Step	5 :stop					
	Block, Circuit,							
	Model Diagram,							
	Reaction Equation,							

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Expected Graph

8 Observation Table, List 1: amogh amulya pallavi vamshi Krishna
Look-up Table, List2: kallesh kalkuta amrish sunil Krishna
Output

Krishna is common name found in both list

9 Sample Calculations
10 Graphs, Outputs
11 Results & Analysis
12 Application Areas

Experiment 8:

13 Remarks

14 Faculty with Date

Signature

-	Experiment No.:	8	Marks	8	Date Planned		Date Con- ducted	
1	Title	Write a C++ program to read k Lists of names and merge them using k-way merge algorithm with k = 8.						
	Course Outcomes							
	Aim							
4	Material / Equip- ment Required	Lab N	Manual					
5	Theory, Formula, Principle, Concept							
6	gram, Activity, Al- gorithm, Pseudo Code	Step Step files t Step done	3: the program to all the "N" 1 4 :open the	am will creat files	e "N" no of fil	les and distri		ntents of that contents are
7	Block, Circuit, Model Diagram, Reaction Equation, Expected Graph	•						
	Observation Table, Look-up Table, Output							
9	Sample Calcula- tions							
	Graphs, Outputs							
11	Results & Analysis							
	Application Areas							
_	Remarks							
14	Faculty Signature with Date							

Experiment 9:

-	Experiment No.:	9	Marks	Date	Date Con-	

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			Plann	ed	ducted
1	Title	Project			
2	Course Outcomes				
_	Aim				
	Material / Equip- ment Required				
	Theory, Formula, Principle, Concept				
6	Procedure, Pro- gram, Activity, Al- gorithm, Pseudo Code				
7	Block, Circuit, Model Diagram, Reaction Equation, Expected Graph				
8	Observation Table, Look-up Table, Output				
	Sample Calcula- tions				
	Graphs, Outputs				
	Results & Analysis				
	Application Areas				
	Remarks				
	Faculty Signature with Date				

Approved