

Board of Studies in Comp. Science met on 23.1.2013.

Members Present:

- Subject Experts:
1. Dr S. Sivakumar,
Asso. Prof. & Head
C.P.A. College, Bodi.
 2. Dr T. Aravalluvan,
Associate Professor,
A.P.S.A. College, Tiruppathur.

- Alumni:
1. Mr C.K. Balaji,
Asst. Prof. in Comp. Science
Govt. Arts & Science College,
Paramakudi.

- Industry:
1. Mr V. Sivakumar MSc, MPhil.,
Managing Director,
SHIVA Systems,
Vandalur.

- Members:
1. Dr T. Kathirvalavakumar - Chairman
 2. Dr D. Christopher Durairaj
 3. Mr R. Palaniappan

Resolutions:

1. It is resolved to approve the detailed syllabus for the II year UG - BSc, Comp. Science.
2. It is resolved to approve the question pattern for Part IV - Skill based subjects, core, life skill subjects.
3. It is resolved to approve the detailed syllabus for the II year PG - MSc, Comp. Science.

Signatures:

1. Dr. T. KATHIRVALAVAKUMAR

2. Dr D. Christopher Durairaj

3. Mr. R. PALANIAPPAN

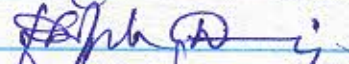
4. DR. T. ARAVALLUVAN

5. Dr. S. SIVAKUMAR

6. Mr. C.K. BALAJI

7. V. SIVAKUMAR



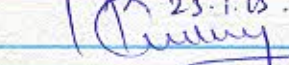




T. Aravalluvan 23/1/13

 23/1/13

C.K. Balaji
23.1.13.



Board of Studies in Computer Science - 7.12.13

Subject experts : 1. Dr. S. Sivakumar
Asso prof & Head in Comp Science
CPA college - Bodi
2. Dr. T. Anaralluran
Asso. prof in Comp Science
ARSA college - Thirupathur

Alumni : 1. Mr. C. K. Balaji
Asst prof & Head in Comp Science
Govt Arts & Science college
Sivakani




Members : 1. Dr. T. Kathiravalavan Kumar - chairman
2. Mr. R. palaniappan
3. Mr. S. Elango

Resolutions :

1. It is resolved to approve the detailed syllabus for IIIrd year B.Sc Computer Science
2. It is resolved to revise the content of the Data structures theory syllabus for the III Semester (VICSC33)
3. It is resolved to replace the Digital Design Lab with office Automation Lab for the I Semester (VICSC1P2)
4. It is resolved to remove the project & viva voce papers in the certificate and diploma programmes - Internet and web-designing (CIESPV and DICSPV)
5. It is resolved to replace two of the initially proposed Elective - 2 papers in the V Semester as follows:
(a) Digital Image processing replaced with Information Security.
(b) Modern Communication System replaced with E-Commerce.
6. It is resolved to change the syllabus content of Mathematical foundation - II for II Semester (VIMAA2C)
7. It is resolved to change the text book

✓ of the theory subject Mathematical Foundation - I for
I semester (DIMAIC).

Signatures :

- | | |
|-----------------------|---|
| 1. T. KATHIRVALAKUMAR |  |
| 2. T. ARAYALLUVAN | T. Aravalluvan. |
| 3. J. Sivakumar |  |
| 4. C.K. BALAJI | C.K. Balaji
2/12/13. |
| 5. R. PALANIAPPAN |  |
| 6. J. ELANGO | J. Elango |

Board of studies in computer science met on 28.3.2015

Subject Experts : 1. Dr. P. SHANMUGAVADIVU M.C.A., Ph.D.
Associate Professor
Department of Computer Science & Applications
Gandhigram Rural Institute - Deemed University
Gandhigram.

University Nominee : Prof. Dr. G. ARUMUGHAM Ph.D.
Professor in Computer Science & Head
Department of Computer Science.
Madurai Kamaraj University.
Madurai.

Industrialist : Mr. S. Prem Chandran B.E.
V.A.S.P. Information Technology.
Vimadhuram.

Members : 1. Dr. T. Kalthiravela Kumar - chairman
2. Dr. D. Christopher Durairaj
3. Mr. R. Palaniappan.

Resolutions:

U.G. - Computer Science [B.Sc]

1. To Interchange Mathematical Foundation - I and Mathematical Foundation - II

2. To Interchange Computer Axioms and DBMS papers.

3. To Rename Computer Network and Security in the VI Semester as
Computer Networks and to reframe the syllabus.

P.G. - Computer Science [M.Sc]

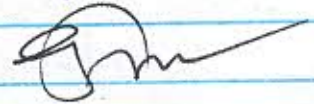
4. To Replace Computer Network and Security paper ^{in II semester} with
Finite Automata and Formal Languages.

5. To Replace Open Source Technology in III semester with
Data Communication and Networks.

6. To Replace Software Project Management in III semester

with Advanced Software Engineering.

Signatures : 1. Prof. Dr. G. Arumugam.



2. Dr. P. SHANMUGARAJAN

P. Shanmugan 28/03/15

3. Mr. S. PREM CHANDRAN

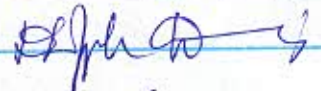


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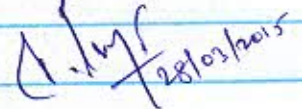
4. Dr. T. KATHIRVALAVAKUMAR.



5. Dr. D. CHRISTOPHER DORAI RAJ



6. Mr. R. PALANISUBRAMANIAM.



Board of Studies in Comp. Science - 20.2.2016

Subject Experts : 1. Dr. P. Shanmugavadivu.
Asso. Prof.
Dept. of Comp. Science & applications
Gandhigram Rural Institute (Pamed Univ)
Gandhigram - 624 302

2. Dr. M. Sumathi
Head & Asso. Prof.
Dept of Comp. Science
Sri Meenakshi Govt Arts College
Madurai - 2

Alumni

: 1. Dr. J. Jebakumari Beulah vasanthi
Asst prof and Head
Dept of CS & IT (UG) and CS (PG)
ANJA College, Sivakani

Members

: 1. Dr. T. Kathiravalakumar - Chairman
2. Mr. R. Palaniappan
3. Dr. S. Elango

Resolutions

U.G. - Computer Science

1. In Sem-3 - Subject code - UACSC31, the title of the paper is changed from core java programming to Java Programming

2. Java programming lab and Adv. Java programming Lab lists are modified

3. The subject "Operating Systems" is included in place of "Computer Graphics" in 4th sem.
P.G. - Computer Science

4. In sem-3, subject titled "Software prog management" has been replaced with a new subject "Software Testing".

2. In Sem-3, subject titled "open source technology" has been replaced with new subject "Data Communication and Networks".
3. In Sem-3, "Software development lab" has been replaced with "python prog lab".
4. In Sem-3, It is resolved to include ~~the~~ "Computer ^{Networking} Security" as additional elective subject.


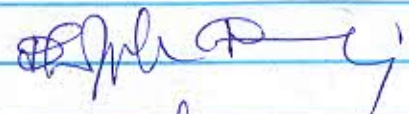
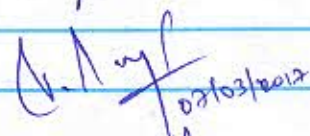
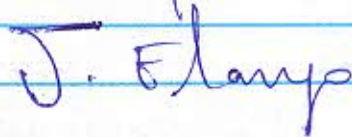
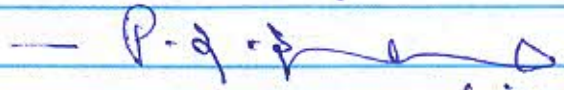
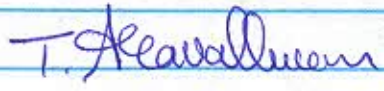
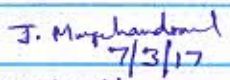
Signatures :

1. Dr. P. Shammugaraduru - P. Shaffin 20/2/16
2. Dr. M. Sumathi - 20/2/16.
3. Dr. J. Jebakumari Reulak Varanthi - J. Jeyaraj 20/2/16.
4. Dr. T. Kathiravelakumar - T. Kathiravelakumar 20/2/16.
5. Mr. R. palaniappan - R. Palaniappan 20/2/16.
6. Dr. S. Elango - S. Elango 20.2.16
- 7.

Board of Studies in Computer Science - 7.3.2017

Board of studies meeting of computer science was held in the Research centre in Computer science on 7.3.2017 by 2 pm. Following members were present. Board discussed the third year B.Sc Computer Science syllabus ~~and~~ in detail and resolved ~~to~~ the following points.

Members Present.


1. DR. T. KATHIAVALAVAKUMAR
Assoc. Prof. & Head, chairman  7/3/17
2. DR. D. CHRISTOPHER DURAIRAJ 
3. DR. R. PELANIAPPEN 
4. DR. S. ELANGO 
5. ~~MR.~~ P. S. SURESH KUMAR — P. S. Suresh Kumar 
Assoc. Prof. & Head, — SUBJECT EXPERT 7/3/17
NMSS Vellaichamy Nadar College
Madurai.
6. DR. T. ARAVALLUVAN  7/3/17
Assoc. Prof. ^{in Computer} ~~Head~~ Science — SUBJECT EXPERT
A.P.S.A College
Tirupathur
7. MR. J. MURUGA CHANDRAVEL
Selection Grade Assistant Professor  7/3/17
MEPCO Schlenk Eng. College — ALUMNI
Amathur, Sivakasi. REPRESENTATIVE.

RESOLUTIONS.

1. Existing elective paper "Computer Algorithms" 

been moved to core paper in the same semester.

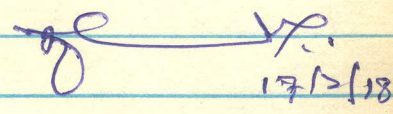
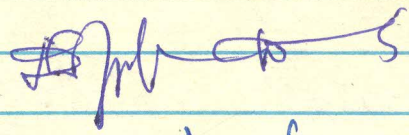
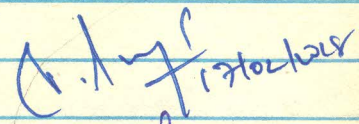
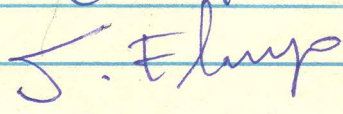
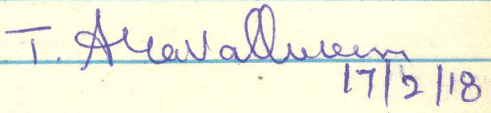
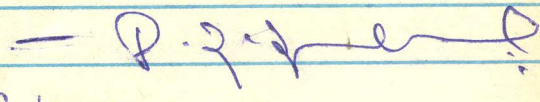
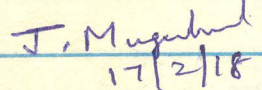
2. Client server programming Lab has been changed to DOT NET PROGRAMMING LAB.
3. Sixth semester core paper ~~computer netw~~ "Data Base Management systems" is moved to Elective paper of the fifth semester.
4. Fifth semester elective paper "Ecommerce" has been changed to "cloud computing".
5. Fifth semester elective paper "operating systems" is changed to "Computer Networks".
6. In the fifth semester, NME paper is changed to "Computer Fundamentals" (Theory paper).
7. In the sixth semester, Data Base Management systems has been changed to "Software Engineering".
8. In the sixth semester, computer networks and security has been changed to "Computer Graphics".
9. In the sixth semester core paper "Mobile Computing" is newly introduced.
10. In the sixth semester, Project a viva-voce is changed to Software Development; Evaluation is only Internal.
11. In the sixth semester, Computer Animation Lab is changed to Android programming Lab.
12. In the sixth semester SBE-Multimedia is changed to SBE-Android programming.
13. In the sixth semester, NME-Fundamentals of NME is ~~not~~ newly introduced theory paper.

 7/3/17
CHAIRMAN.

Board of studies in Computer Science - 17.2.2018

Board of studies meeting of computer science was held on 17.2.2018 by 11 am. Following members were present. Board discussed the first year Computer science syllabi in detail and resolved the following.

MEMBERS PRESENT

1. DR. T. KATHIRVALAVAKUMAR
Assoc. Prof. & Head, CHAIRMAN  17/2/18
2. DR. D. CHRISTOPHER DULAIRAJ 
3. DR. R. PALANIAPPAN 
4. DR. S. ELANGO 
5. DR. T. ARAVALLUVAN
Assoc. Prof. in Computer Science
A.P.S.A. COLLEGE
THIRUPATHUR  17/2/18
6. MR. P. S. SURESH KUMAR 
Assoc. Prof. & Head in Computer Science
N.M.S.S. Vellaichamy Nadar College (Autonomous)
Madurai.
7. MR. J. MURUGACHANDRAVEL
Selection Grade Assistant Professor  17/2/18
MEPRO SCHLENK ENG. COLLEGE
SIVAKASI

Continued in Page 34

RESOLUTIONS

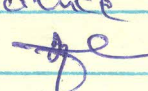
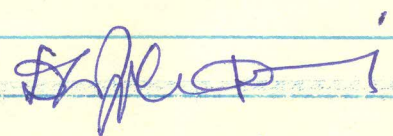
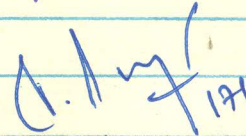
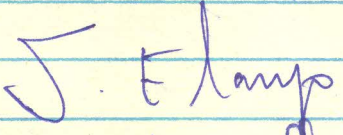
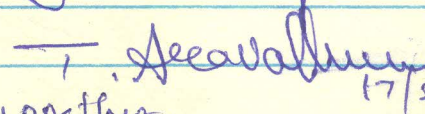
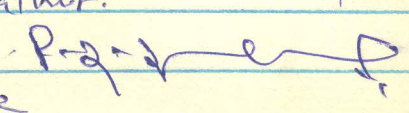
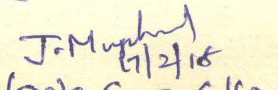
1. Resolved to split the existing core paper "Programming in C" into two papers namely (a) Programming in C (b) Advanced programming in C
2. Resolved to include dynamic memory and bit level programming in addition with structure, Union, pointers, file Management in the paper Advanced programming in C
3. Resolved to replace the ^{existing} paper "Object oriented programming in C++" ~~existing~~ in second semester with the paper Advanced programming in C
4. Resolved to replace the LAB paper "Programming in C++" with the LAB paper "Advanced programming in C"
5. Resolved to revise the existing LAB paper "programming in C" ~~with~~

17/2/2018

Board of studies - M.Phil Computer Science

Board of studies meeting was held in the department of Computer Science on 17.2.2018 by 12 am. The Board discussed the existing papers and resolved to make changes in the elective paper ~~and~~ Digital Image Processing and introduce the new elective paper Multicore Programming in the first semester.

Members Present.

1. Dr. J. Kathiravalakumar CHAIRMAN
Assoc. Prof. & Head in Computer Science
VANSAR College,
Virudhunagar.  17/2/18.
2. Dr. D. Christopher Durairaj
Assoc. Prof. 
3. Dr. R. Palaniappan
Assoc. Prof.  17/2/2018
4. Dr. S. Elango
Asst. Prof. 
5. Dr. J. Aravalluvan
Assoc. Prof., APSA College, Tirupattur.  17/2/18
6. Mr. P. S. Sureshkumar
Assoc. Prof., N.M.S.S.V.N College 
7. Mr. J. Murguchandrasekar
selection grade Asst Prof. Mepco schlanke Eng College  17/2/18

Board of studies Meeting of B.U.S./PG Computer Science
Held on 23.02.2019

Minutes of the Meeting

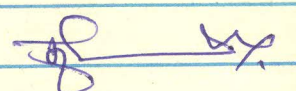
The Board of studies Meeting of UG/PG Computer Science was held today at 11 am in the Department of Computer Science. After having detailed discussion, the Board Resolved the following.

1. Resolved to delete HTML, Java script in UNIT III of Advanced Java programming and include JDBC as unit II leading to 20% of change in the existing syllabus of the course. ~~Correspondingly~~ Correspondingly change to be made in Advanced Java Lab.
2. Resolved to introduce the value added courses
① web designing with distribution packages and ② HTML, Javascript, CSS for the students of II B.Sc computer Science with 35 contact hours.
3. Resolved to replace "Microcontrollers and Embedded system development in C" (UICSSL^{SI}) with "Internet of Things" as self Learning course (NEW course) and include "software Testing" as another self learning course (NEW).
4. Resolved to ~~replace~~ replace "embedded system" in semester V with "system software" which is currently in semester VI. This will come into effect for the students those who have joined in the academic year 2018-19.
5. Resolved to remove computer Graphics from semester VI and include it in self learning courses with the same syllabus and

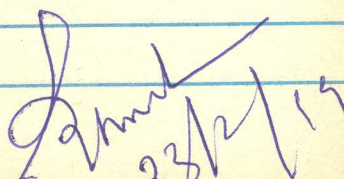
Processing" course for the students admitted from 2018-19.

6. Resolved to replace "system software" course in semester VI with "R Programming" course as a skill Based subject. This is a new course.
7. Resolved to approve the panel of Examiners prepared by the members of the Board of studies.
8. Resolved to change the Text book of the Course "Principles of Compiler Design" in IIIrd Semester of M.Sc CS Programme.
9. Resolved to replace the "Software Testing" course in IIIrd Semester of M.Sc CS programme with "Python Programming" course.
10. Resolved to change the contents of "Python Programming Lab" in IIIrd Semester of M.Sc CS programme.
11. Resolved to replace the "Soft Computing" course in IVth Semester of M.Sc CS programme with "Neural Network" course.
12. Resolved to introduce value added course in M.Sc CS programme namely "Big Data Analytics Using Tools"
13. Resolved to revise the Internal & External marks ratio as 40:60

MEMBERS PRESENT

1. Dr. T. KATHIRVALAVAKUMAR - CHAIRMAN 

2. Dr. M. RAMAKRISHNAN Prof. & Head
MKU Syndicate Member,
Dept. of Computer Applications
MK University.


23/2/19

3. Dr. D. CHRISTOPHER DURAIRAJ

Christopher Durairaj

4. Dr. R. PALANIAPPAN

R. Palaniappan

5. Mr. P. S. SURESHKUMAR

Head, Dept. of Computer Science

S.V.N. College, Madurai

P. S. Sureshkumar

7. Dr. T. ARAVALLVAN

Assoc. prof. in Computer Science

A.P.S.A. College,

Thiruppathur.

T. Aravalluvan

8. Mr. J. MURUGACHANDRAVEL Alumni Member.

Asst. prof. selection grade

MCA Dept.

Meeco schlenk Engg. College

Sivakasi

J. Murugavel

23/2/2019

Board of studies Meeting of Computer Science
held on ~~23~~ 21.09.2019.

Venue: Research Centre in Computer Science

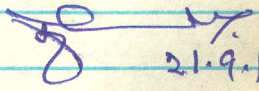
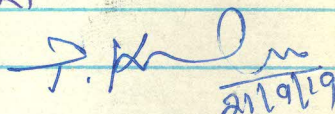
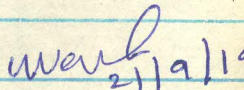
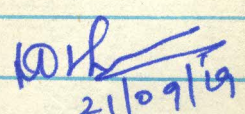
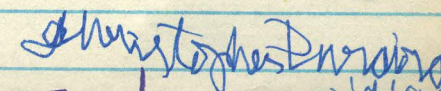
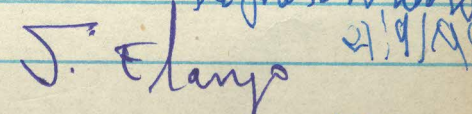
Time: 11 am

After having detailed discussion in the Board, the following resolutions were made.

1. Resolved to introduce "~~Python~~ Programming in Python" as a new course instead of Dot net programming.
2. Resolved to transfer "Dot net programming LAB" to VIth semester to replace the existing skill based subject "Android programming" theory.
3. Resolved to introduce the new course "Angular JS" as skill based subject instead of the existing course "web programming".
4. Resolved to introduce the new course "LAB: office automation" as NME instead of computer fundamentals course.
5. Resolved to revise "Computer Graphics" course with "Computer Graphics and Digital Image Processing" by including 3 new units in Image processing.
6. Resolved to introduce the new course "LAB: NODE JS Programming" instead of ~~Android programming~~ ^{system software} theory as skill based subject.

7. Resolved to transfer the system software in sixth semester to fifth semester to replace ~~7~~ Resolved to ~~transfer~~ replace system software theory with ~~the~~ "LAB: DOT net programming" as ~~a~~ skill based ~~to~~ subject. the "Embedded system" in elective course.
8. Resolved to ~~into~~ change the existing course ~~a~~ "Introduction to HTML" with the course "LAB: Fundamentals of web Designing" as NME.
9. Resolved to introduce the value added course "OFFICE AUTOMATION".
10. Resolved to Revise the Existing course "Mathematical Foundation II" in the second semester. Revision with 20% modification.

MEMBERS PRESENT

1. Dr. T. KATHIRVALAVAKUMAR - CHAIRMAN  21/9/19
2. Dr. T. KALAI SELVI - SUBJECT EXPERT
GRI, Gundlupet  21/9/19
3. Mr. V. VENKATESH BABU - SUBJECT EXPERT  21/9/19
4. Dr. M. GETHSIYAL AUGASTA - ALUMNUS  21/9/19
5. Dr. D. CHRISTOPHER DURAIRAJ  21/9/19
6. Dr. S. ELANGO  21/9/19



BOARD OF STUDIES MEETING OF B.Sc Computer Science HELD ON 19.03.2022

MINUTES OF THE MEETING

The Board of Studies Meeting of **B.Sc Computer Science** was held today at **10.30a.m.** in the Department of Computer Science Lab. After having a detailed discussion, the Board resolved the following:

1. Resolved to revise the syllabus of the courses for I year **B.Sc Computer Science** as follows:

Semester I

Subject Core / Elective / SBE / NME / SLS	Title of the Existing Course	Title of the Course after revision	Focus on Employability / Entrepreneurship / Skill Development	Revised / New / No Change / Interchanged If revised % of change
Core	Programming in C	Programming in C		No Change
Core	LAB: Programming in C	LAB: Programming in C		No Change
Core	Digital Principles and Applications	Digital Principles and Applications		Revised 50% (SBE into Core)
Core	Allied : Mathematical Foudation I	Allied : Mathematical Foudation I		No Change

Semester II

Subject Core / Elective / SBE / NME /	Title of the Existing Course	Title of the Course after revision	Focus on Employability / Entrepreneurship / Skill Development	Revised / New / No Change / Interchanged If revised % of change
Core	Advanced Programming in C	Advanced Programming in C		No Change
Core	LAB: Advanced Programming in C	LAB: Advanced Programming in C		No Change
Core	Computer Organization	Computer Organization		Revised 50% (SBE into Core)
Core	Allied: Mathematical Foundation II	Allied: Mathematical Foundation II		No Change

The detailed syllabus passed in the Board of Studies Meeting is given in Annexure – I.



VIRUDHUNAGAR HINDU NADARS' SENTHIKUMARA NADAR COLLEGE

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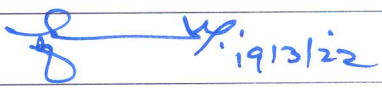
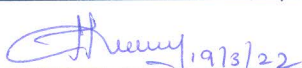
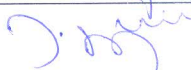

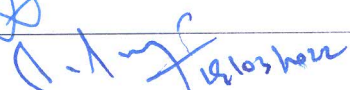
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2. Resolved to approve the panel of Examiners suggested by the members of the Board as given in Annexure – II.

3. (Any other resolutions passed in the meeting) *Resolved to ^{approve} ~~pass~~ the skeleton structure of three year B.Sc. Computer science program, which is attached herewith as Annexure III*

Members Present:

Name	Category	Signature
Dr. T. KATHIRAVALAKUMAR	Chairman	 19/3/22
—	University Nominee	—
Dr. T. Aravalluvan	Subject Expert	T. Aravalluvan 19/3/22
Dr. K. KRISHNAVENI	Subject Expert	 19/3/22
R. SATHESH KUMAR	Alumnus	
P. VIJAYAVEL	Corporate Sector	PC
Dr. D. Christophorus Duraisamy	Member	
Dr. R. PALANIAPPAN.	Member	 19/3/22
Dr. J. ELANGO	Member	J. Elango



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Annexure II

PANEL OF EXAMINERS

1. Dr.K.S.Jeyalakshmi, Assistant Professor of Computer Science (SF), S.Vellaichamy Nadar College, Nagamalai Pudukottai, Madurai. Mobile : 9790225288
2. Mr.P.S.Suresh Kumar, Associate Professor of Computer Science & Head, S.Vellaichamy Nadar College, Nagamalai Pudukottai, Madurai. Mobile : 9486468928
3. Mr.Thiruppathi Rajan, Associate Professor of Computer Science & Head, American College, Madurai. Mobile: 9443424190
4. Dr.M.Karthigaiselvi, Assistant Professor of Computer Science, S.F.R. College, Sivakasi. Mobile : 9487681925
5. Mrs.L.Priya, Assistant Professor of Computer Science, Sri Kaleeswari College, Sivakasi. Mobile: 9488716741



BOARD OF STUDIES MEETING OF NAME OF THE PROGRAMME HELD ON
(08.10.2022)

MINUTES OF THE MEETING

The Board of Studies Meeting of **B.Sc Computer Science** was held on **8.10.2022** at 10.30 **am.** in the Department of Computer Science. After having a detailed discussion, the Board resolved the following:

- Resolved to revise the syllabus of the courses for II year **B.Sc Computer Science** as follows:

Semester III

Subject Core / Elective / SBE / NME / SLS	Title of the Existing Course	Title of the Course after revision	Focus on			Revised / New / No Change / Interchanged If revised % of change	Course Contribution
			Employability	Entrepreneurship	Skill Development		Local/ National/ Global Level
Core	Java Programming	Java Programming	Y	Y	Y	25%	Global Level

Semester IV

Subject Core / Elective / SBE / NME / SLS	Title of the Existing Course	Title of the Course after revision	Focus on			Revised / New / No Change / Interchanged If revised % of change	Course Contribution
			Employability	Entrepreneurship	Skill Development		Global Level
Core	Advanced Java Programming	Advanced Java Programming	Y	Y	Y	25%	Global Level
Core	LAB: Programming in Advanced Java	LAB: Programming in Advanced Java	Y	Y	Y	25%	Global Level

The detailed syllabus passed in the Board of Studies Meeting is given in Annexure – I.

- Resolved to approve the draft syllabi for **B.Sc Computer Science** with the following changes:



Course	Unit No.	Changes
Java Programming	I to V	Text Book Changed... In each Unit, concepts with new approach are introduced
Programming in Advanced Java	V	Servlet is removed...JSP is introduced...
LAB: Programming in Advanced Java	V	Updated the program list with JSP and remove the servlet programs

- Resolved to approve the panel of Examiners suggested by the members of the Board as given in Annexure – II.
- Resolved to approve the Blue Print of the Question paper for each course as given in Annexure – III.

Members Present:

Name	Category	Signature
Dr.T.Kathirvalavakumar	Chairman	8/10/22
—	University Nominee	—
—	Subject Expert	—
—	Subject Expert	—
Mr.R.Satheesh Kumar	Alumnus	8/10/22
Mr.P.Vijayavel	Corporate Sector	8/10
Dr.D.Christopher Durairaj	Member	—
Dr.R.Palaniappan	Member	08/10/22
Dr.S.Elango	Member	8.10.22



BOARD OF STUDIES MEETING OF B.Sc COMPUTER SCIENCE HELD ON

Date: 07.06.2023

MINUTES OF THE MEETING

The Board of Studies Meeting of **B.Sc Computer Science** was held today at 10.30 am in the Department of Computer Science. After having a detailed discussion, the Board resolved the following:

- Resolved to revise the syllabus of the courses for I year **B.Sc Computer Science** as follows:

Semester I

Subject Core / Elective / SBE / NME / SLS	Title of the Existing Course	Title of the Course after revision	Focus on			Revised / New / No Change / Interchanged If revised % of change	Course Contribution
			Employability	Entrepreneurship	Skill Development		Local/ National/ Global Level
Core	Programming in C	Python Programming	Yes	Yes	Yes	Moved from Fifth Semester	Global
Core	Lab: Programming in C	Lab: Python Programming	Yes	Yes	Yes	Moved from Fifth Semester	Global
Elective	Mathematical Foundation-I	Numerical Methods	No	No	Yes	Moved from Third semester	Global
Skill Enhancement course	Value Education	Problem Solving Techniques	Yes	No	Yes	New	Global
Skill Enhancement course	Digital Principles and Applications	Office Automation	Yes	Yes	Yes	Moved from Fifth Semester	National
Ability Enhancement	Digital Principles and Applications	Soft skill-I	Yes		Yes	New	National

Semester II

Subject Allied/ Core / Elective / SBE / NME / SLS	Title of the Existing Course	Title of the Course after revision	Focus on			Revised / New / No Change / Interchanged If revised % of change	Course Contribution
			Employability	Entrepreneurship	Skill Development		Local/ National/ Global Level
Core	Advanced Programming in C	Data Structures & Algorithms	Yes	Yes	Yes	Revised	Global



Core	Lab: Advanced Programming in C	Lab:Data Structures & Algorithms	Yes	Yes	Yes	New	Global
Elective	Mathematical Foundation-II	Graph Theory and its application	NO	No	Yes	Revised 75%	Global
Skill Enhancement course	Environmental Studies	Quantitative Aptitude	Yes	Yes	Yes	Interchanged	Global
Skill Enhancement course	Computer Organization	Advanced Excel	Yes	Yes	Yes	New	Global
Ability Enhancement	Computer Organization	Soft skill-II	Yes		Yes	New	National

The detailed syllabus passed in the Board of Studies Meeting is given in Annexure – I.

2. Resolved to approve the draft syllabi for B.Sc Computer Science with the following changes:


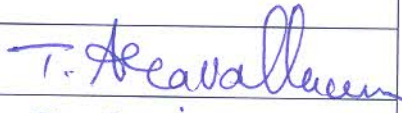


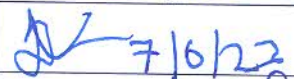


Course	Unit No.	Changes
Problem Solving Techniques	I, II, III, IV, V	Fully New Syllabus
Soft Skill - I	I, II, III, IV, V	Fully New Syllabus
Office Automation		NME course is moved to First Year from Fifth Semester
Data Structures & Algorithms	I, II, III, IV, V	Two courses are combined into one course
Lab: Data Structures and Algorithms	I, II, III, IV, V	Fully New Syllabus
Advanced Excel	I, II, III, IV, V	NME course is moved to Second semester from Sixth Semester Fully New Syllabus
Soft Skill - II	I, II, III, IV, V	Fully New Syllabus



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Members Present:

Name	Category	Signature
Dr. T. KATHIRVALAKA KUMAR	Chairman	 7/6/23
ABSENT	University Nominee	
ABSENT	Subject Expert	
T. ARAVALLUVAN	Subject Expert	
R. Ballesh Kumar	Alumnus	 7/6/23
P. VIJAYAVEL	Corporate Sector	 7/6/23
D. CHRISTOPHER DURAIKAT	Member	 7/6/23
Dr. R. PALANIAPPAN.	Member	 07/06/23
J. ELANAO	Member	 J. Elanao



**BOARD OF STUDIES MEETING OF NAME OF THE PROGRAMME HELD ON 30.10.2023
 MINUTES OF THE MEETING**

The Board of Studies Meeting of **B.Sc Computer Science** was held today at **10.30am.** in the Department of Computer Science. After having a detailed discussion, the Board resolved the following:

1. Resolved to revise the syllabus of the courses for I year II Semester **B.Sc Computer Science** as follows:

Semester II

Subject Allied/ Core / Elective / SBE / NME / SLS	Title of the Existing Course	Title of the Course after revision	Focus on			Revised / New / No Change / Interchanged If revised % of change	Course Contribution
			Employability	Entrepreneurship	Skill Development		Local/ National/ Global Level
Core	Data Structure and Algorithm	Object Oriented Programming with C++	Y	N	Y	NEW	Global Level
Core	LAB: Data Structure and Algorithm	LAB: Programming in C++	Y	N	Y	NEW	Global Level
NME	Quantitative Aptitude	LAB: Web Designing with HTML	Y	N	Y	NEW	Global Level
Allied	Graph Theory and its Applications	Graph Theory and its Applications	N	N	Y	No Change	Global Level
SBE	Advanced Excel	Digital Principles and Applications	Y	N	Y	NEW	Global Level
SBE	Soft Skill - 2	Computer Organization	Y	N	Y	NEW	Global Level

The detailed syllabus passed in the Board of Studies Meeting is given in Annexure – I.

2. Resolved to approve the draft syllabi for **B.Sc Computer Science** with the following changes:



Course	Unit No.	Changes
Object Oriented Programming with C++	I, II, III, IV,V	Completely changed

3. (Any other resolutions passed in the meeting)

Members Present:

Name	Category	Signature
Dr.T.KATHIRVALAVAKUMAR	Chairman	<i>[Signature]</i> 30/10/23
Mr.R.SATHESH KUMAR	Alumnus	<i>[Signature]</i> 30/10/23
Mr.P.VIJAYAVEL	Corporate Sector	<i>[Signature]</i> 30/10/23
Dr.D.CHRISTOPHER DURAIRAJ	Member	<i>[Signature]</i> 30/10/23
Dr.R.PALANIAPPAN	Member	<i>[Signature]</i> 30/10/23
Dr.S.ELANGO	Member	<i>[Signature]</i>



ANNEXURE – I

SECOND SEMESTER

Part	List of Courses	Credit	Hours per week(L/T/P)
Part-I	Language (Tamil)	3	6
Part-II	English	3	6
Part-III	CC3 – Object Oriented Programming with C++	4	4
	CC4 - Practical: Programming in C++	4	4
	Elective Course 2 (Generic / Discipline Specific) – Graph Theory and its applications	3	4
Part-IV	Skill Enhancement Course- SEC-2 (Non Major Elective) – LAB: Web Designing with HTML	2	2
	Skill Enhancement Course – SEC-3 (Discipline / Subject Specific) – Digital Principles and Applications	2	2
	Skill Enhancement Course – SEC-4 - Computer Organization	2	2
		23	30

CORE 3 - OBJECT ORIENTED PROGRAMMING WITH C++

Contact Hours per week : 4

Subject Code:

Contact Hours per semester : 60

Objectives

Train the students in writing programs using object oriented programming by C++ language

UNIT I

(12 Hours)

Overview of C: History of C – Importance of C – Sample Programs– Basic Structure of C Programs. **Constants, Variables and Data Types:** Character Set – C Tokens – Keywords and Identifiers – Constants – Variables – Data Types – Declaration of Variables – Assigning Values to Variables – Defining Symbolic Constants – Declaring a Variable as Constants. **Operators and Expressions:** Operators: Arithmetic, Relational, Logical, Assignment, Increment & Decrement, Conditional, Bitwise Operators – Arithmetic Expressions – Evaluation of Expressions – Precedence of Arithmetic Operators – Type Conversion – Operator Precedence and Associativity. **Managing Input and Output**



Operations: Reading & Writing a Character. **Decision Making and Branching:** Introduction – Decision Making with **If** Statement – Simple **If** Statement – The **If...Else** statement – Nesting of **If...Else** Statements – The **Else If** Ladder – The **Switch** Statement – The **?:** Operator – The **goto** Statement.

UNIT II (12 Hours)

Decision Making and Looping: Introduction – The **while** Statement – The **do** Statement – The **for** Statement – Jumps In Loops. **Array:** Introduction – One-Dimensional Arrays: Declaration & Initialization— Two-Dimensional Arrays: Initialization – Multi-Dimensional Arrays. **User-Defined Functions:** Introduction – A Multi-Function Program – Elements & Definition – Return Values and Their Types – Function Calls – Function Declaration – Category of Functions– Nesting of Functions – Recursion – Passing Arrays to Functions – Passing Strings to Functions.

UNIT III (12 Hours)

Object Oriented Programming and C++: Object Oriented Programming Paradigm – Basic Concepts – Benefits of OOP – Object-oriented languages – Applications – What is C++ - Applications of C++ - A Simple C++ Program – Structure of C++ Program. **Class and Objects:** Class – Member Function – Nesting of Member Function – Arrays with in a Class – Static Data Member and Member Functions – Array of Objects – Object an Function Arguments – Returning Objects – Friendly Functions – Types of Constructors – Destructors

UNIT IV (12 Hours)

Operator Overloading and Inheritance: Definition – Overloading Unary and Binary Operators – Types of Inheritance – Virtual Base Class and Abstract Class

UNIT V (12 Hours)

Pointers, Virtual Functions and Polymorphism: Introduction to Pointers – Pointers to Objects – This Pointers – Pointers to Classes – Virtual Functions - virtual constructors and Destructors. Exception Handling: Basics – Exception Handling Mechanism – Throwing – Catching – Rethrowing – specifying exceptions – Exceptions in constructor, Destructor and operator overloading functions.

TEXT BOOK

1. Programming in ANSI C, E. Balagurusamy – Mc Graw Hill, Eighth Edition, 2019.

UNIT I – Chapters 2 - 6

UNIT II – Chapters 7 - 10

2. Object Oriented Programming with C++, E. Balagurusamy – Mc Graw Hill, Sixth Edition, 2013.

UNIT III – Chapters – 1, 2, 3, 5, 6

UNIT IV – Chapters – 7, 8

UNIT V – Chapters – 9, 13

Reference Books

Mastering in C++, K.R.Venugopal, Raj Kumar, T.Ravisankar – Mc Graw Hill, 2011.



CORE 4 LAB: PROGRAMMING IN C++

Contact Hours per week : 4
Contact Hours per semester : 60

Subject Code:

Objectives:

To train the students programming skills in Object Oriented Programming Language (C++) by illustrating the Object Oriented specialized concepts with implementing some simple programs

I. Simple Programs

1. Write C++ programs to solve simple problems (without using class and object).
2. Write a C++ program to calculate area and circumference of a circle using **Inline Function.00**
3. Write a C++ program to prepare student mark sheet using **Class & Object**.
4. Write a C++ program to prepare employee pay bill using **Class & Object**.
5. Write a C++ program to compute area of 3 different shapes using **Function Overloading**.

II. Programs using Constructors and Friend Functions

6. Write a C++ program to implement **Parameterized Constructor** for computing volume of different objects using **Constructor Overloading**.
7. Write a C++ program for Bank transaction using **Multiple Constructors**.
8. Write a C++ program using **Constructor Overloading** to compute addition of two complex numbers.
9. Write a C++ program swapping two values between two classes using **Friend Function**.
10. Write a C++ program to find maximum and minimum of two numbers between two classes using **Friend Function**.

III. Programs using Operator Overloading

11. Write a C++ program to **Overload unary- Operator** which changes the sign of integer data members of an object.
12. Write a C++ program to **Overload binary +Operator** that adds two complex numbers.
13. Write a C++ program to perform string concatenation using **binary + Operator Overloading**.
14. Using **Overloading binary- operator**, write a C++ program to calculate Internet café usage time in HH:MM format.
15. Write a C++ program to subtract two matrices using **binary Operator - Overloading**.

IV. Programs using Inheritance

16. Write a C++ program to process four arithmetic operations to illustrate **Single Inheritance**.
17. Write a C++ program to process Student Information using **Multilevel Inheritance**.
18. Write a C++ program to process EB Bill creation using **Multiple Inheritances**.
19. Write a C++ program to process Family Details using **Hybrid Inheritance**.
20. Write a C++ program to process Employee Details using **Hierarchical Inheritance**.

V. Program using Polymorphism

21. Mark Processing based on year of study
22. EB Bill Processing based on type of Power Tarif.



Course Code: EC2	Graph		Credits: 3
	Theory and its applications		
Lecture Hours: (L) per week: 5	Tutorial Hours : (T) per week	Lab Practice Hours: (P) per week	Total: (L+T+P) per week: 5
Course Category : EC2	Year & Semester: I Year & I I Semester	Admission Year: 2023	
Pre-requisite	Basic knowledge in data and representations		
Links to other Courses			
<p>Learning Objectives: (for teachers: what they have to do in the class/lab/field)</p> <ol style="list-style-type: none"> 1. Definition of Graph, sub graph their representations, degree and algebraic operations. 2. Connected graphs, weighted graphs and shortest paths 3. Trees: Characterizations, spanning tree, minimum spanning trees 4. Eulerian and Hamiltonian graphs: Characterization, Necessary and sufficient conditions 5. Special classes of graphs: Bipartite graphs, line graphs, chordal graphs. 			
<p>Course Outcomes: (for students: To know what they are going to learn)</p> <p>CO1: To Introduce the fundamental concepts in graph theory Graphs, subgraphs, walks, Euler graphs, Hamiltonian Paths Tree Properties , Hamiltonian paths and circuits</p> <p>CO2: Understanding the concepts of Circuits, Cut set and its Properties, Network Flows, Isomorphism and Combinatorial and Planar Graphs.</p> <p>CO3: Applying the concept of Colouring with Chromatic Number, Directed Graphs, Matching , Covering Pattern and Euler Graphs</p> <p>CO4: Analysing the Various Concepts of Representation of Graphs, Euler Paths Circuit, Kruskals and Prims Algorithms, Connected Components.</p> <p>CO5: Implementation of an application using All Types of Graphs and evaluate the Applications with travelling sales person Problem, K colour Problem with n vertices in a Graph and Shortest Path finding Problem using Directed and Undirected Graphs.</p>			



Recap: (not for examination) Motivation/previous lecture/ relevant portions required for the course) [This is done during 2 Tutorial hours)		
Units	Contents	Required Hours
I	INTRODUCTION: Graph-mathematical definition- Introduction – sub graphs – Walks, paths, Circuits connectedness- Components- Euler Graphs- Hamiltonian paths and circuits-Trees- properties of Trees- Distance and centers in Tree- Rooted and Binary Trees	12
II	CONNECTIVITY AND PLANARITY: Introduction to circuits - cut set- properties of cut set- All cut sets – connectivity and separability – Network Flows - 1- Isomorphism - 2-Isomorphism- Combinatorial and Geometric graphs- Planar Graphs – Different representation of planar graph.	12
III	COLORING AND DIRECTED GRAPH: Basics of Colouring & Chromatic number – Chromatic partitioning – Graph Colouring – four colour Problem Chromatic polynomial - Matching – Covering - Directed graphs - Types of Directed Graphs – Diagraphs and binary relations – Directed paths- Euler Graph.	12
IV	MATRIX REPRESENTATION IN GRAPH: Matrix representation of graphs, Sub graphs & Quotient Graphs, Transitive Closure digraph, Euler's Path & Circuit (only definitions and examples), spanning Trees of Connected Relations, Prim's Algorithm to construct Spanning Trees, Weighted Graphs, Minimal, Spanning Trees by Prim's Algorithm & Kruskal's Algorithm.	12
V	APPLICATIONS OF GRAPH: Traveling Sales Person Problem with Directed and Un directed Graph, - Graph with n vertices and k colours- Shortest path from one to many	15



	Cities with directed graph- Shortest Paths with Un directed Graphs-Connected Components.	
Skills acquired from the course	Knowledge, Problem Solving, Analytical ability, Professional Competency, Professional Communication and Transferrable Skill	
Learning Resources: 1 Narsingh Deo , “ Graph Theory with Application to Engineering and Computer Science” Prentice Hall of India 2010(Reprint) 2 Rosen H “Discrete Mathematics and Its Application “ Mc Graw Hill , 2007		
Reference Books: 1 Discrete Maths for Computer Scientists & Mathematicians by Mott, Kandel, Baker 2 Clark J and Holton DA “ First look at Graph Theory” Allied Publishers 1995 3 Discrete Maths for Computer Scientists & Mathematicians by Mott, Kandel, Baker		
Web resources: Web resources from NDL Library, E-content from open source libraries https://d3gt.com/ https://www.coursera.org/courses?query=graph%20theory		

DIGITAL PRINCIPLES AND APPLICATIONS

Contact Hours per week: 2

Subject Code:

Contact Hours per semester: 30

Objectives: To provide basic knowledge on Digital Electronics and to understand the working principles of Digital computer building blocks like ALU (i.e. Combinational logic circuit) and Registers (i.e. Sequential logic circuit)

UNIT I Digital Logic: Binary Number System - Hexadecimal Number System – ASCII - Gray codes - Basic Gates – Boolean algebra – NOR Gates – NAND Gates

UNIT II Boolean Simplifications: Boolean Laws and Theorems – Sum of Products Methods – Truth Table to Karnaugh Map – Pairs, Quads and Octets – Karnaugh Simplification (SOP Method)

UNIT III Data Processing Circuits: Multiplexers – De Multiplexers - Decoders –BCD to Decimal Decoder – Encoders – Exclusive OR Gates



UNIT IV Arithmetic Circuits: Sign-Magnitude – 1's Complement, 2's Complement representation - 2's Complement Arithmetic – Arithmetic Building Blocks.

UNIT V Flip Flops: RS Flip Flops- D Flip Flops –Flip Flop Timing - JK Flip Flops – Types of Shift Registers – SISO - Asynchronous counters

Text Book: *Digital Principles and Applications: Donald P. Leach, Albert Paul Malvino, Goutan Saha, 8th Edition, Mc Graw Hill.*

UNIT I – Chapters - 5.1 to 5.3, 5.5, 5.7, 5.8, 5.10

UNIT II – Chapters – 3.1 to 3.5

UNIT III – Chapters – 4.1 to 4.4, 4.6, 4.7

UNIT IV – Chapters – 6.4 to 6.7

UNIT V – Chapters – 8.1 to 8.6, 9.1, 9.2 & 10.1

Reference Book: Digital Electronics: principles and applications, Roger L. Tokheim, Mc Graw Hill, 1998.

Computer Organization

Contact Hours per week: 2

Subject Code:

Contact Hours per semester: 30

Objectives

Give in depth knowledge on architecture and operation of digital computers to understand the different functional units of the digital computer and how they co-ordinate together to carry out processing.

UNIT I (6 Hours)

Microoperations: Register transfer language- Microoperations – Common bus system - Instruction Codes – Computer Registers – Computer Instructions

UNIT II (6 Hours)

Control unit: – Timing and Control - Hardwired control- Instruction Cycle – Micro programmed control – Control Memory – Address Sequencing

UNIT III (6 Hours)

Central Processing Unit: Introduction – General Register Organization – Stack Organization – Instruction Formats – Addressing Modes

UNIT IV (6 Hours)

Input – Output Organization: Peripheral devices - I/O Interface – Asynchronous Data Transfer – Modes of Transfer – Priority Interrupt – Direct Memory Access



UNIT V (6 Hours)

Memory organization: Memory Hierarchy – Main Memory – Associative Memory – Cache memory – Virtual memory.

TEXT BOOK

Computer System Architecture – M.Morris Mano & Rajib Mall, Pearson 3rd edition

UNIT I – Chapters – 4.1 to 4.4, 5.1 to 5.3

UNIT II– Chapters – 5.4 to 5.5, 7.1 to 7.2

UNIT III– Chapters – 8.1 to 8.5

UNIT IV– Chapters – 11.2 to 11.6

UNIT V– Chapters - 12.1 to 12.2, 12.4 to 12.6

Reference Book:

Computer Organization and Architecture, William Stallings, Pearson 7th Edition.

NME - II : Web Designing with HTML

Contact Hours per week: 2 hrs Credit: 2

Contact Hours per semester: 30 hrs Subject Code:

Objective: To learn the basic designing of web pages to meet the need of an hour.

Programs:

1. Write HTML code to develop a web page having the background in red and body “My First Page” in any other color.
2. Create a HTML document giving details of your name, age, telephone, address, roll no. using align tag.
3. Write HTML code to design a page containing a text in a paragraph give suitable heading style.
4. Design a page having background color given text color red and using all the attributes of font tag.
5. Write HTML code to create a WebPage that contains an Image at its center.
6. Create a web Page using href tag having the attribute alink, vlink.
7. Write a HTML code to create a web page of pink color and display moving message in red color.
8. Create a web page, showing an ordered list of name of your five friends.



9. Create a HTML document containing a nested list showing the content page of any book

10. Create a web page, showing an unordered list of name of fruits

11. Create the following table in HTML with Dummy Data

Name of Train	Place	Destination	Train No	Time		Fare
				Arrival	Departure	

12. Write HTML code to generate following output

1	2	3	4
5	Image		6
7			8
9	10	11	12

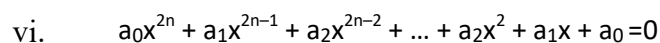
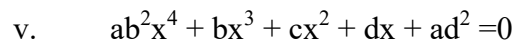
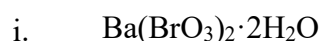
13. Write HTML code to create a web page that displays your class time table.

1. 14. Write a HTML code to generate the following output:

a. Diamondshape

```
      1                5
    2      3      6      7
      4                8
```

b. Chemical Equations



15. Create a web page having two frames one containing links and another with contents of the links.

Frame 1	Frame 2
	Frame 3

When link is clicked appropriate contents should be displayed on Frame2.



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16. Design an application form using all input types.

17. Design a website of your own by using all html tags.
