

FOREWORD

The National Curriculum Framework (NCF) 2005 recommends that children's life at school must be linked to their life outside the school. This principle marks a departure from the legacy of bookish learning which continues to shape our system and causes a gap between the school, home and community. The syllabi and textbooks developed on the basis of NCF signify an attempt to implement this basic idea. They also attempt to discourage rote learning and the maintenance of sharp boundaries between different subject areas. We hope these measures will take us significantly further in the direction of a child-centred system of education outlined in the National Policy on Education (1986).

The success of this effort depends on the steps that school principals and teachers will take to encourage children to reflect on their own learning and to pursue imaginative activities and questions. We must recognise that, given space, time and freedom, children generate new knowledge by engaging with the information passed on to them by adults. Treating the prescribed textbook as the sole basis of examination is one of the key reasons why other resources and sites of learning are ignored. Inculcating creativity and initiative is possible if we perceive and treat children as participants in learning, not as receivers of a fixed body of knowledge. These aims imply considerable change in school routines and mode of functioning. Flexibility in the daily time-table is as necessary as rigour in implementing the annual calendar so that the required numbers of teaching days are actually devoted to teaching.

NCF-2005 envisages an increase in the optional number of subjects available for students of Classes XI and XII. This textbook marks an attempt in this direction. Its subject matter concerns how we work with computers, rather than about how computers works. It is expected that this textbook will be used with the help of methods of teaching which might enhance the flexible and participatory nature of new communication technology.

NCERT appreciate the hard work done by the Textbook Development Committee and its Chief Advisor, Professor M.M. Pant, Former Pro-Vice Chancellor,

Indira Gandhi National Open University, New Delhi. We are indebted to the institutions and organisations which have generously permitted us to draw upon their resources, material and personnel. We are especially grateful to the members of the National Monitoring Committee, appointed by the Department of Secondary and Higher Education, Ministry of Human Resource Development under the Chairpersonship of Professor Mrinal Miri and Professor G.P. Deshpande, for their valuable time and contribution.

As an organisation committed to systemic reform and continuous improvement in the quality of its products, NCERT welcomes comments and suggestions which will enable us to undertake further revision and refinement.

New Delhi
May 2008

Director
National Council of Educational
Research and Training

© NCERT
not to be republished

PREFACE

Computers have become a way of life in the present day world. That everyone should be educated about the implications of this technology is the need of the hour. Till now NCERT has not proposed a course or brought out a textbook in this area. The course outlined for this textbook is an attempt to design a generally friendly course that would not only be contemporary but also leave sufficient scope for expansion into unknown realms of computer activity that may emerge in future.

The National Curriculum Framework 2005 recommends that theoretical component of Higher Secondary stage should emphasise on problem solving methods and that the awareness of historical development of key concepts be judiciously integrated into the content of a subject. It also recommends that given the pervasive impact of computer and communication technologies (CCT), a course related to this should address this infrastructure challenge seriously and explore viable and innovative alternatives with regard to hardware, software and connectivity technologies appropriate for rural and urban Indian schools.

NCF 2005 states that the book should act as an instrument for achieving social change in order to reduce the divide based on economic class, gender, caste, religion and region. NCF also speaks about tremendous effectiveness of the computer and computing technology in shaping modern society which has created the need for an educated public that can utilise such technology most effectively for the betterment of society and humankind. This book is aligned to these broad guidelines of NCF.

Presumably, this would be a coveted book for “everybody”, irrespective of any particular stream of higher secondary stage, for it deals with the real challenges that the discipline is trying to solve. It emphasises development of problem-solving and, equally important, problem-formulating skills. It reduces the importance of technology and underscores the need for learning skills to manipulate the technology. It focuses on some of the real problems that come up with the expansion of the technology – security, piracy and digital identity. Above all, the course focuses as

much on the excitements as on the limitations of the new information technology. Effective integration of information and communication technologies into all curricula assists students in developing the abilities to use, manage, and understand the technologies.

The National Knowledge Commission refers to preparing a work-force adequately skilled and oriented to actively participate in the emerging Knowledge Economy. This book would be a major contributor to developing the skills sets required for all school leavers.

This part of Class XI textbook contains six chapters under three themes/units, viz., Web Publishing Technology; Teamwork and Web Based Collaboration Tools and Emerging Technologies. The book has been conscientiously designed and is the result of the renewed efforts of the Textbook Development Team comprising of school teachers, subject experts, academicians and technical experts from government, non-government and private institutions/organisations. Some of the members worked at the advisory level while others worked towards the actual developmental activity. It is hoped that the students will appreciate the beauty and logic of computers and communication technology. It has truly been a team work.

The course is not biased towards any stream; it can be opted as an elective subject with any other combination, be it science, commerce, arts or humanities. The students may or may not continue to study about computers beyond the higher secondary stage but it seems they will find the inherent logic behind CCT useful in any other branch they may like to pursue, be it administration, languages, social sciences, environment, engineering, technology, sciences, mathematics, medicine or any other branch of knowledge. In order to encourage learning through solving real life problem in collaborative environment, a full chapter is devoted to “Project based Learning”. Also, chapter on “CCT Projects in Local Context” will provide insight about effective uses of CCT in improving quality of life of a common man, be a fisherman, a farmer, a teacher, or a businessman, a Government employee or anybody in their day today needs. Also with a hope that the child should be able to visualise that the journey from Abacus to PC has not come to an end, rather it is evolving continuously and efforts are going on bring further advancements in technology and its tools, a chapter on “Emerging Trends in CCT” has been introduced. For those who pursue computers beyond this stage the content of the book will certainly provide a sound base.

In this book we have tried to bring in a conceptual coherence. The pedagogy and the use of easily understandable language are at the core of our effort without sacrificing the rigour of the subject. The nature of the subject of CCT is such that a certain minimum use of mathematics is a must. We have tried to develop the mathematical formulations in a simple and logical fashion as far as possible.

This book has some features which, we earnestly hope will enhance its usefulness for the students. Each chapter is provided with objectives in

the beginning and a summary at its end for a quick overview of the contents of the chapter. There are some questions which require critical thinking which would make a student think about real-time application of CCT. Further, a large number of solved examples are included in the text in order to clarify the concepts and/or to illustrate the application of these concepts in everyday real-life situations. Some Practical activities/Case studies have been included which provokes students for deep thinking. Some of these are from real-life situations. Students are urged to solve these and in doing so, they may find them very educative. Some items inside boxes are introduced in many chapters either for this purpose or to highlight some special features of the contents requiring additional attention of the learners. Some information has been provided in shaded box which is meant for supplementary reading and not for evaluation. Glossary of terms and concepts is given towards the end which will act as a ready reckoner.

Completing this book has only been possible because of the spontaneous and continuous support of many people. We express our gratitude to the Director, NCERT, for entrusting us with the task of preparing this textbook as a part of national effort for improving general/school education. The Head, Department of Computer Education and Technological Aids, NCERT, was always willing to help us in our endeavour in every possible way.

The draft got excellent academic inputs from teachers, students and experts who sincerely suggested improvement during the development of this book. We are thankful to all those who conveyed these inputs to NCERT. We are also thankful to the members of the Review Workshop organised to discuss and refine the first draft.

We welcome suggestions and comments from our valued users, especially students and teachers. We wish our young readers a happy journey to the exciting realm of CCT.

M. M. Pant
Chief Advisor
Textbook Development Committee

TEXTBOOK DEVELOPMENT COMMITTEE

CHIEF ADVISOR

M.M. Pant, *Professor*, Former Pro-Vice Chancellor, Indira Gandhi National Open University (IGNOU), New Delhi

MEMBERS

Arpita Burman, *Scientist 'D'*, National Information Centre (NIC), Department of Information Technology, Ministry of Communication and Information Technology, New Delhi

Basav Roychoudhury, *Lecturer*, Rajiv Gandhi Indian Institute of Management (RGIIM), Shillong (Meghalaya)

C. Gurumurthy, *Director (Academic)*, Central Board of Secondary Education, 'Shiksha Kendra', New Delhi

Chandita Mukherjee, *Director*, Comet Media Foundation, Mumbai

Deepak Shudhalwar, *Lecturer*, PSSCIVE, Bhopal

Divya Jyoti, *PGT*, *Computer Science*, SLS DAV Public School, Mausam Vihar, Delhi

Gurpreet Kaur, *Head*, Department of Computer Science, G. D. Goenka Public School, Vasant Kunj, New Delhi

H.N.S. Rao, *Deputy Commissioner (Academic) (Retired)*, Navodaya Vidyalaya Samiti (NVS), New Delhi

Rajendra Tripathi, *Facilitator - People Development*, Azim Premji Foundation, Bangalore

M.P.S. Bhatia, *Assistant Professor*, Netaji Subhas Institute of Technology, New Delhi

Manish Kumar, *PGT*, Rajkiya Pratibha Vikas Vidyalaya, Raj Nivas Marg, Delhi

Mukesh Kumar, *Head*, Department of Computer Science, Delhi Public School, R.K. Puram, New Delhi

Prakash Khanale, *Vice Principal*, DEM College of Parbhani, Maharashtra

Rajni Jindal, *Assistant Professor*, Department of Computer Engineering,
Delhi College of Engineering, Delhi

Sushila Madan, *Director-IT*, Vivekanand Institute of Professional Studies,
Shivaji Marg, New Delhi

V.P. Chahal, *PGT Computer Science*, Jawahar Navodaya Vidyalaya,
Mungeshpur, Delhi

Utpal Mallik, *Professor (Retired)*, NCERT, New Delhi

COORDINATOR

Asha Jindal, *Reader*, DCETA, NCERT, New Delhi

TEAM MEMBER

Rajaram S. Sharma, *Professor & Head*, DCETA, NCERT, New Delhi

© NCERT
not to be republished

ACKNOWLEDGEMENTS

The National Council of Educational Research and Training (NCERT) gratefully acknowledges the valuable contributions of individuals and organisations involved in the development of the Part II of the textbook 'Computers and Communication Technology (CCT)' for Class XI. Acknowledgements are also due to the following practicing teachers and subject experts for reviewing the draft manuscript and giving useful suggestions for its improvement: Smt. Arpita Burman, Dr. Basav Roychoudhary, Prof. Utpal Mallik, Smt. Chandita Mukherjee, Smt. C. Gurumurthy, Shri H.N.S. Rao, Dr. Prakash Khanale, Dr. Deepak Shudhalwar, Smt. Divya Jyoti, Smt. Gurpreet Kaur, V. P. Chahal, Manish Kumar, Mukesh Kumar, Dr. M.P.S. Bhatia, Rajendra Tripathi, Dr. Rajni Jindal, Dr. Sushila Madan and Shri Ravindra Singh.

The Council also thanks Prof. Vasudha Kamath (Joint Director, CIET), Prof. Kamlesh Mittal and Smt. Pushp Lata Verma for their support and help at various stages.

The Council also acknowledges the contributions of the supporting staff of Department of Computer Education and Technological Aids (DCETA), Moqaddas Azam *DTP Operator* in shaping this book. The efforts of the Publication Department, NCERT are also duly acknowledged.

The Council is grateful to the websites and authors who have offered images, illustrations and content in the public domain. Specific credits are given at appropriate places in the textbook.

The Council gratefully acknowledges continuous help and support from Prof. M. M. Pant, *Chief Advisor, Textbook Development Committee* in conceiving and developing the textbook.

CONTENTS

UNIT IV

WEB PUBLISHING TECHNOLOGIES **229-322**

- Chapter 9 : Web Page Designing Using HTML 231
Chapter 10 : Client-Side Scripting Using JavaScript 274

UNIT V

TEAMWORK AND WEB BASED COLLABORATION TOOLS **323-356**

- Chapter 11 : Project Based Learning 325
Chapter 12 : CCT Projects in Local Context 349

UNIT VI

EMERGING TECHNOLOGIES **357-385**

- Chapter 13 : Emerging Trends in CCT 359
Chapter 14 : Computer Controlled Devices 376

GLOSSARY **386-395**

INDEX **396-401**

WEB PAGE DESIGNING 9

USING HTML

Objectives

After completing this Chapter, the student will be able to:

- recognise HTML tags and their attributes,
- use HTML tags and attributes to develop web pages,
- use HTML tags and attributes to format text and images, design layouts, present tables and lists and create hyperlinks,
- use HTML forms to add interactivity to web pages and
- design a web site and construct it using HTML.

“Logic will get you from A to B. Imagination will take you everywhere.”

Albert Einstein

Introduction

As we have learnt earlier, the Internet is a very large network of computers spread across the world. The Internet allows for each of these computers to send and receive information from each other. One of the major applications of the Internet is the World Wide Web (WWW). The World Wide Web or the web in short, can be thought of as an interconnected set of documents, images, audio, video files or software files.

When you connect to the Internet and look around (we call it browsing), you are using a very interesting feature of the web, hyperlinks. Each time you click on a highlighted piece of text or image, you jump to another piece of text or image and this could be on the same page, another page on the same hard disk or on a page residing on another computer, half way across the world.

How this works and how we could make it happen is what we will learn in this chapter. Web pages use a language called the Hyper Text Markup Language (HTML). The browser



Search by Title / Author / ISBN / Descrij



PRODUCT NOT FOUND!

Product not found!

[continue](#)

Products By Alphabet

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z #

School Books

[Oswaal Books](#)

[Class 9th Books](#)

[Class 10th Books](#)

[Class 11th Books](#)

[Class 12th Books](#)

Engineering Books

[RGPV Books & Notes](#)

[VTU Books & Notes](#)

[Free Engineering Books](#)

[Information Technology Books](#)

[Electrical Engineering Books](#)

Competitive Exams

[Bank PO Exam](#)

[Gate Books](#)

[Teaching Exams Books](#)

[AIEEEE-NIT-JEE MAINS Books](#)

[UPSC Books](#)

Professional Courses

[ICSI Books & Study Materials](#)

[Chartered Accountant Books](#)

[Company Secretary Books](#)

[ICSI 7 days Trial](#)

[Latest Scanners](#)

About KopyKitab.com

Kopykitab is India's 1st digital & multiple publishers platform. Kopykitab has largest collection of e-textbooks & branded digital content in Higher & School education. We have strong foundation of leading publishers & tutorials as content partners.

We offer e-textbook, Test Preparation, Notes & LMS for various curriculam to Students, Professionals & Institutes. These are same textbooks, way smarter. Our goal is to make education affordable & accessible. A user can access the content in all electronic devices e.g. Mobile, PC & Tabs

Information

[About Us](#)

[FAQ](#)

[Privacy Policy](#)

[Terms & Conditions](#)

[Payment Information](#)

Links

[ICSI eLibrary](#)

[KopyKitab eBook Reader](#)

[Contact Us](#)

[Site Map](#)

My Account

[Refer & Earn](#)

[My Account](#)

[Order History](#)

[Wish List](#)

[Newsletter](#)

[My Library](#)

[Office 365 Email Login](#)

[Google Login](#)

Verified By



©2016 DigiBook Technologies (P) Ltd, All Rights Reserved. An ISO 9001:2008 Certified Company