Web Technologies:

A Holistic Approach to Development, Security and User Experience

Dr. Pradeep Chouksey
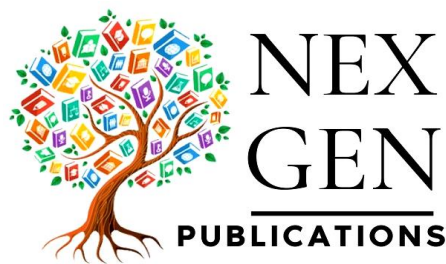**Dr.Parveen Sadotra**
Mr. Mayank Chopra
Ms. Rabia koser

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Authored By:

Dr. Pradeep Chouksey
Associate Professor and Head of Department
Computer Science and Informatics at Central University Himachal
Pradesh (H.P.)

Dr. Parveen Sadotra
Assistant Professor, Department of Computer Science and Informatics
Central University of Himachal Pradesh, Shahpur Parisar, Shahpur

Mr. Mayank Chopra
Assistant Professor, Department of Computer Science & informatics
Central University of Himachal Pradesh, India

Ms. Rabia Koser
Assistant Professor, Govt. P.G. College, Rajouri Higher Education
Department , UT of Jammu and Kashmir

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Preface

Our digital world has become dependent on the web, which has shaped the way we interact, obtain information, and do business. Still, developing a good web experience takes more than simply skill with code. Using a comprehensive approach, this book walks you through the three main components of web development: user experience (UX), security, and development.

Forget about learning in silos. You will examine the complex dance between these elements here. You will learn how to create secure and effective websites by delving into the fundamental technologies that underpin them. We'll provide you with the information you need to protect your works from ever changing threats.

However, having a safe and useful website is only half the battle. This book delves deeply into the art of creating user-friendly, interesting, and approachable interfaces. Understanding design principles and user behaviour can help you build websites that not only function flawlessly but also connects with your target audience.

"Web Technologies: A Holistic Approach to Development, Security and User Experience" offers a thorough road map for creating reliable and usercentric web experiences in today's changing digital environment, regardless of your level of experience as a developer.

Acknowledgement

Developing **"Web Technologies: A Holistic Approach to Development, Security, and User Experience"** has been a rewarding and cooperative experience. We owe a great deal to numerous sources that shaped our viewpoint and stoked our enthusiasm for this always changing sector.

First of all, we are grateful to the amazing web development community, a worldwide network of creative individuals that never stop pushing the envelope of what's conceivable. Their combined knowledge has been a wonderful resource for everything from open-source projects to thoughtprovoking blog entries and forums.

We also express our gratitude to the ethical hackers and security researchers who dedicate their lives to finding and fixing flaws in online technology. Our emphasis on secure development processes has been greatly influenced by their commitment to protecting the digital landscape.

We owe a debt of gratitude to the researchers and designers of user experience (UX) who support the ideals of human-centered design. Their emphasis on accessibility, usability, and emotional design has served as a model for us as we have pushed for a comprehensive strategy that puts user delight above functionality.

Lastly, we would want to thank all of the people who have generously contributed their knowledge, perspectives, and best practices at conferences and online. The information on these pages has been shaped by these many voices.

Dr. Pradeep Chouksey

Dr. Parveen Sadotra

Mr. Mayank Chopra

Ms. Rabia Koser

About the Authors

Dr. Pradeep Chouksey is an Associate Professor and Head of Department of Computer Science and Informatics at Central University Himachal Pradesh (H.P.). He has teaching and research experience of more than 16 years. He is actively involved in research with more than 50 presentations, publications and articles in several reputed peer-reviewed international journals, National and international conferences, edited books, etc. He had served as session chair at several National and international conferences. He serves as external examiner for doctoral candidates, external member of doctoral committees, member of board of studies, and academic auditor for various institutions and universities. He also serves as reviewer of papers for various international journals and subject expert for external committees.

Dr. Parveen Sadotra (MCA, Ph.D, CCSP, CEH, CCSP and CCCA) is presently an Assistant Professor in Department of Computer Science and Informatics, Central University of Himachal Pradesh, Shahpur Parisar, Shahpur. He has definitive experience in the field of computers and Cyber Crime Investigation Training.

He specialize in Cyber Security, Ethical Hacking and Cyber Forensics, Furthermore, Dr.

Sadotra presented and published various research papers on Cyber Laws, Investigation of cyber crime, Intrusion Detection System, Cyber Security, Web Security, E- Commerce and Cyber Education in the leading journals. He also published two books on Mobile Technologies and Cloud Computing. He also serves as reviewer of papers in conference. In addition to this he delivered various Lectures and Presentation in Workshop, Seminar and in capsule Trainings. He has got various Appreciations & Commendations certificates from J&K Police for Working on Cyber Crime.

Mayank Chopra has received BSc Physics (Hons.) degree from Himachal Pradesh University, India, and MSc Information Technology degree from Central University of Himachal Pradesh, India. Currently he is working as an Assistant Professor in the Department of Computer Science & informatics at Central University of Himachal Pradesh, India. His current research interest includes deep learning, UAV, web development, security and data science.

Ms. Rabia Koser (MSc- IT, M.Phil) is presently working as Assistant Professor in Higher Education Department, UT of Jammu and Kashmir and presently posted at Govt. P.G. College, Rajouri, Union Territory of J&K.

She specializes in Various Programming Languages like C, C++, Java, Software Engineering, Management Information System and Cloud Computing. Furthermore, Prof. Rabia presented and published various research papers on Cyber Forensic and Cyber Security in the leading journals. She also published a book on Cloud Computing.

Table of Contents

ABOUT THE AUTHORS

Dr. Pradeep Chouksey

Associate Professor and Head of Department

Computer Science and Informatics at Central University Himachal Pradesh (H.P.)

Dr. Parveen Sadotra

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Central University of Himachal Pradesh, Shahpur Parisar, Shahpur

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Central University of Himachal Pradesh, India

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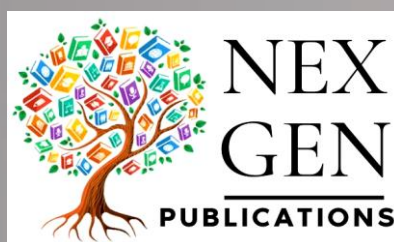
ABOUT THE BOOK

The book **"Web Technologies: A Holistic Approach to Development, Security, and User Experience"** provides a thorough examination of the complex web development ecosystem. This book explores the fundamental ideas, methods, and best practices needed to develop cutting-edge online applications. It covers a wide range of tools and techniques necessary for creating reliable and scalable online solutions, from frontend frameworks to backend technologies.

Additionally, the book emphasizes security heavily, walking readers through the complexities of protecting online applications from numerous threats and vulnerabilities. It offers information on secure coding techniques, authentication, and encryption to guarantee the confidentiality and integrity of data.

In addition, a comprehensive discussion of the significance of user experience (UX) is provided, along with methods for creating user-friendly interfaces and maximizing efficiency to raise user happiness.

"Web Technologies" gives developers, security experts, and designers the know-how they need to succeed in the ever-changing field of online development through real-world examples, case studies, and helpful guidance.