

Contemporary Engineering Economics Park 5th Edition

This fifth edition of “Engineering Physiology” has the same purpose as the earlier prints: to provide physiological information which engineers, designers, supervisors, managers and other planners need to make work and equipment “fit the human.” Chapters have been revised, figures and tables updated. New material discusses, among other topics, models of the human body that provide practical and design-oriented information, biomechanics describing the body’s capabilities and limitations, effects of shift work / sleep loss on attitude and performance, and new techniques to measure body sizes and the resultant changes in applications of that information. The book does not replace standard (biological-medical-chemical) textbooks on human physiology; instead, it provides information on human features and functions which are basic to ergonomics or human (factors) engineering, terms often used interchangeably. It helps lay the foundations for teamwork among engineers and physiologists, biologists and physicians. Bioengineering topics concern bones and tissues, neural networks, biochemical processes, bio- and anthromechanics, biosensors, perception of information and related actions, to mention just a few areas of common interest. Such understanding provides the underpinnings for devising work tasks, tools, workplaces, vehicles, work-rest schedules, human-machine systems, homes and designed environments so that we humans can work and live safely, efficiently and comfortably. Fully revised and updated, this second edition of Contemporary Choreography presents a range of articles covering choreographic enquiry, investigation into the creative process, and innovative challenges to traditional understandings of dance making. Contributions from a global range of practitioners and researchers address a spectrum of concerns in the field, organized into seven broad domains: Conceptual and philosophical concerns Processes of making Dance dramaturgy: structures, relationships, contexts Choreographic environments Cultural and intercultural contexts Challenging aesthetics Choreographic relationships with technology. Including 23 new chapters and 10 updated ones, Contemporary Choreography captures the essence and progress of choreography in the twenty-first century, supporting and encouraging rigorous thinking and research for future generations of dance practitioners and scholars.

Engineering Fluid Mechanics guides students from theory to application, emphasizing critical thinking, problem solving, estimation, and other vital engineering skills. Clear, accessible writing puts the focus on essential concepts, while abundant illustrations, charts, diagrams, and examples illustrate complex topics and highlight the physical reality of fluid dynamics applications. Over 1,000 chapter problems provide the “deliberate practice”—with feedback—that leads to material mastery, and discussion of real-world applications provides a frame of reference that enhances student comprehension. The study of fluid mechanics pulls from chemistry, physics, statics, and calculus to describe the behavior of liquid matter; as a strong foundation in these concepts is essential across a variety of engineering fields, this text likewise pulls from civil engineering, mechanical engineering, chemical engineering, and more to provide a broadly relevant, immediately practicable knowledge base. Written by a team of educators who are also practicing engineers, this book merges effective pedagogy with professional perspective to help today’s students become tomorrow’s skillful

engineers.

Completely revised, this fifth edition offers comprehensive coverage of engineering economics. It features discussions on related topics dealing with business profit and loss and business related communications.

Fuzzy set approaches are suitable to use when the modeling of human knowledge is necessary and when human evaluations are needed. Fuzzy set theory is recognized as an important problem modeling and solution technique. It has been studied extensively over the past 40 years. Most of the early interest in fuzzy set theory pertained to representing uncertainty in human cognitive processes. Fuzzy set theory is now applied to problems in engineering, business, medical and related health sciences, and the natural sciences. This book handles the fuzzy cases of classical engineering economics topics. It contains 15 original research and application chapters including different topics of fuzzy engineering economics. When no probabilities are available for states of nature, decisions are given under uncertainty. Fuzzy sets are a good tool for the operation research analyst facing uncertainty and subjectivity. The main purpose of the first chapter is to present the role and importance of fuzzy sets in the economic decision making problem with the literature review of the most recent advances.

This student-friendly text on the current economic issues particular to engineering covers the topics needed to analyze engineering alternatives. Students use both hand-worked and spreadsheet solutions of examples, problems and case studies. In this edition the options have been increased with an expanded spreadsheet analysis component, twice the number of case studies, and virtually all new end-of-chapter problems. The chapters on factor derivation and usage, cost estimation, replacement studies, and after-tax evaluation have been heavily revised. New material is included on public sector projects and cost estimation. A reordering of chapters puts the fundamental topics up front in the text. Many chapters include a special set of problems that prepare the students for the Fundamentals of Engineering (FE) exam. This text provides students and practicing professionals with a solid preparation in the financial understanding of engineering problems and projects, as well as the techniques needed for evaluating and making sound economic decisions. Distinguishing characteristics include learning objectives for each chapter, an easy-to-read writing style, many solved examples, integrated spreadsheets, and case studies throughout the text. Graphical cross-referencing between topics and quick-solve spreadsheet solutions are indicated in the margin throughout the text. While the chapters are progressive, over three-quarters can stand alone, allowing instructors flexibility for meeting course needs. A complete online learning center (OLC) offers supplemental practice problems, spreadsheet exercises, and review questions for the the Fundamentals of Engineering (FE) exam.

MATLAB PROGRAMMING WITH APPLICATIONS FOR ENGINEERS seeks to simultaneously teach MATLAB as a technical programming language while introducing the student to many of the practical functions that make solving problems in MATLAB so much easier than in other languages. The book provides a complete introduction to the fundamentals of good procedural programming. It aids students in developing good design habits that will serve them well in any other language that he or she may pick up later. Programming topics and examples are used as a jumping off point for exploring the rich set of highly optimized application functions that are built directly into MATLAB.

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Contemporary Engineering Economics is intended for undergraduate engineering students taking introductory engineering economics while appealing to the full range of engineering disciplines for which this course is often required: industrial, civil, mechanical, electrical, computer, aerospace, chemical, and manufacturing engineering, as well as engineering technology. This edition has been thoroughly revised and updated while continuing to adopt a contemporary approach to the subject, and teaching, of engineering economics. This text aims not only to build a sound and comprehensive coverage of engineering economics, but also to address key educational challenges, such as student difficulty in developing the analytical skills required to make informed financial decisions.

For Engineering Economics courses, found in departments of Industrial, Civil, Mechanical, and Electrical Engineering. New from the author of the best-selling Contemporary Engineering Economics text, Fundamentals of Engineering Economics offers a concise, but in-depth coverage of all fundamental topics of Engineering Economics.

This book presents a new approach to the valuation of capital asset investments and investment decision-making. Starting from simple premises and working logically through three basic elements (capital, income, and cash flow), it guides readers on an interdisciplinary journey through the subtleties of accounting and finance, explaining how to correctly measure a project's economic profitability and efficiency, how to assess the impact of investment policy and financing policy on shareholder value creation, and how to design reliable, transparent, and logically consistent financial models. The book adopts an innovative pedagogical approach, based on a newly developed accounting-and-finance-engineering system, to help readers gain a deeper understanding of the accounting and financial magnitudes, learn about new analytical tools, and develop the necessary skills to practically implement them. This diverse approach to capital budgeting allows a sophisticated economic analysis in both absolute terms (values) and relative terms (rates of return), and is applicable to a wide range of economic entities, including real assets and financial assets, engineering designs and manufacturing schemes, corporate-financed and project-financed transactions, privately-owned projects and public investments, individual projects and firms. As such, this book is a valuable resource for a broad audience, including scholars and researchers, industry practitioners, executives, and managers, as well as students of corporate finance, managerial finance, engineering economics, financial management, management accounting, operations research, and financial mathematics. It features more than 180 guided examples, 50 charts and figures and over 160 explanatory tables that help readers grasp the new concepts and tools. Each chapter starts with an abstract and a list of the skills readers can expect to gain, and concludes with a list of key points summarizing the content.

For courses in engineering and economics Comprehensively blends engineering concepts with economic theory Contemporary Engineering Economics teaches engineers how to make smart financial decisions in an effort to create economical products. As design and manufacturing become an integral part of engineers' work, they are required to make more and more decisions regarding money. The Sixth Edition helps students think like the 21st century engineer who is able to incorporate elements of science, engineering, design, and economics into his or her products. This text comprehensively integrates economic theory with principles of engineering, helping students build sound skills in financial project analysis.

MyEngineeringLab™ not included. Students, if MyEngineeringLab is a recommended/mandatory component of the course, please ask your instructor for the correct ISBN and course ID. MyEngineeringLab should only be purchased when required by an instructor. Instructors, contact your Pearson representative for more information.

MyEngineeringLab is an online homework, tutorial, and assessment program designed to work

with this text to engage students and improve results. Within its structured environment, students practice what they learn, test their understanding, and pursue a personalized study plan that helps them better absorb course material and understand difficult concepts. Instructors can choose from a wide range of assignment options, including time limits, proctoring, and maximum number of attempts allowed. The bottom line: MyEngineeringLab means less time grading and more time teaching.

Chemical separations are of central importance in many areas of environmental science, whether it is the clean up of polluted water or soil, the treatment of discharge streams from chemical processes, or modification of a specific process to decrease its environmental impact. This book is an introduction to chemical separations, focusing on their use in environmental applications. The authors first discuss the general aspects of separation technology as a unit operation. They also describe how property differences are used to generate separations, the use of separating agents, and the selection criteria for particular separation techniques. The general approach for each technology is to present the chemical and/or physical basis for the process and explain how to evaluate it for design and analysis. The book contains many worked examples and homework problems. It is an ideal textbook for undergraduate and graduate students taking courses on environmental separations or environmental engineering. Regarded as one of the most influential management books of all time, this fourth edition of Leadership and Organizational Culture transforms the abstract concept of culture into a tool that can be used to better shape the dynamics of organization and change. This updated edition focuses on today's business realities. Edgar Schein draws on a wide range of contemporary research to redefine culture and demonstrate the crucial role leaders play in successfully applying the principles of culture to achieve their organizational goals.

This book is a fascinating account of the financial disaster which overtook Southeast Asia in 1997. The author explains the causes, events, reactions, and effects of the Asian currency crisis. Starting with the crash of the Thai baht, Professor Tan traces the chain of events and details the economic, social and political consequences in the countries involved, plus the responses of the major economic institutions like the World Bank and IMF are described. He also includes a chapter on the Asian economic miracle in the years before the crash, and asks whether that sort of growth is sustainable anyway. The final chapters deal with the lessons to be learned and the possible paths to recovery. This book is essential reading for anyone in the fields of finance, economics, or politics, but it is also interesting and accessible to the lay reader with an interest in world economies.

This work offers a concise, but in-depth coverage of all fundamental topics of engineering economics.

"The economics of American higher education are driven by one key factor--the availability of students willing to pay tuition--and many related factors that determine what schools they attend. By digging into the data, economist Nathan Grawe has created probability models for predicting college attendance. What he sees are alarming events on the horizon that every college and university needs to understand. Overall, he spots demographic patterns that are tilting the US population toward the Hispanic southwest. Moreover, since 2007, fertility rates have fallen by 12 percent. Higher education analysts recognize the destabilizing potential of these trends. However, existing work fails to adjust headcounts for college attendance probabilities and makes no systematic attempt to distinguish demand by institution type. This book analyzes demand forecasts by institution type and rank, disaggregating by demographic groups. Its findings often

contradict the dominant narrative: while many schools face painful contractions, demand for elite schools is expected to grow by 15+ percent. Geographic and racial profiles will shift only slightly--and attendance by Asians, not Hispanics, will grow most. Grawe also use the model to consider possible changes in institutional recruitment strategies and government policies. These "what if" analyses show that even aggressive innovation is unlikely to overcome trends toward larger gaps across racial, family income, and parent education groups. Aimed at administrators and trustees with responsibility for decisions ranging from admissions to student support to tenure practices to facilities construction, this book offers data to inform decision-making--decisions that will determine institutional success in meeting demographic challenges"--

The rapid conversion of land to urban and suburban areas has profoundly altered how water flows during and following storm events, putting higher volumes of water and more pollutants into the nation's rivers, lakes, and estuaries. These changes have degraded water quality and habitat in virtually every urban stream system. The Clean Water Act regulatory framework for addressing sewage and industrial wastes is not well suited to the more difficult problem of stormwater discharges. This book calls for an entirely new permitting structure that would put authority and accountability for stormwater discharges at the municipal level. A number of additional actions, such as conserving natural areas, reducing hard surface cover (e.g., roads and parking lots), and retrofitting urban areas with features that hold and treat stormwater, are recommended.

This text covers the basic techniques and applications of engineering economy for all disciplines in the engineering profession. The writing style emphasizes brief, crisp coverage of the principle or technique discussed in order to reduce the time taken to present and grasp the essentials. The objective of the text is to explain and demonstrate the principles and techniques of engineering economic analysis as applied in different fields of engineering. This brief text includes coverage of multiple attribute evaluation for instructors who want to include non-economic dimensions in alternative evaluation and the discussion of risk considerations in the appendix, compared to Blank's comprehensive text, where these topics are discussed in two unique chapters.

Full coverage of manufacturing and management in mechanical engineering
Mechanical Engineers' Handbook, Fourth Edition provides a quick guide to specialized areas that engineers may encounter in their work, providing access to the basics of each and pointing toward trusted resources for further reading, if needed. The book's accessible information offers discussions, examples, and analyses of the topics covered, rather than the straight data, formulas, and calculations found in other handbooks. No single engineer can be a specialist in all areas that they are called upon to work in. It's a discipline that covers a broad range of topics that are used as the building blocks for specialized areas, including aerospace, chemical, materials, nuclear, electrical, and general engineering. This third volume of Mechanical Engineers' Handbook covers

Manufacturing & Management, and provides accessible and in-depth access to the topics encountered regularly in the discipline: environmentally benign manufacturing, production planning, production processes and equipment, manufacturing systems evaluation, coatings and surface engineering, physical vapor deposition, mechanical fasteners, seal technology, statistical quality control, nondestructive inspection, intelligent control of material handling systems, and much more. Presents the most comprehensive coverage of the entire discipline of Mechanical Engineering Focuses on the explanation and analysis of the concepts presented as opposed to a straight listing of formulas and data found in other handbooks Offers the option of being purchased as a four-book set or as single books Comes in a subscription format through the Wiley Online Library and in electronic and other custom formats Engineers at all levels of industry, government, or private consulting practice will find Mechanical Engineers' Handbook, Volume 3 an "off-the-shelf" reference they'll turn to again and again.

Outlines a systematic process for improving the value of a project through the analysis of its functions while explaining how to reduce costs and maximize quality in products, processes and services in manufacturing, construction and management.

World-renowned economist Klaus Schwab, Founder and Executive Chairman of the World Economic Forum, explains that we have an opportunity to shape the fourth industrial revolution, which will fundamentally alter how we live and work. Schwab argues that this revolution is different in scale, scope and complexity from any that have come before. Characterized by a range of new technologies that are fusing the physical, digital and biological worlds, the developments are affecting all disciplines, economies, industries and governments, and even challenging ideas about what it means to be human. Artificial intelligence is already all around us, from supercomputers, drones and virtual assistants to 3D printing, DNA sequencing, smart thermostats, wearable sensors and microchips smaller than a grain of sand. But this is just the beginning: nanomaterials 200 times stronger than steel and a million times thinner than a strand of hair and the first transplant of a 3D printed liver are already in development. Imagine "smart factories" in which global systems of manufacturing are coordinated virtually, or implantable mobile phones made of biosynthetic materials. The fourth industrial revolution, says Schwab, is more significant, and its ramifications more profound, than in any prior period of human history. He outlines the key technologies driving this revolution and discusses the major impacts expected on government, business, civil society and individuals. Schwab also offers bold ideas on how to harness these changes and shape a better future--one in which technology empowers people rather than replaces them; progress serves society rather than disrupts it; and in which innovators respect moral and ethical boundaries rather than cross them. We all have the opportunity to contribute to developing new frameworks that advance progress.

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As Japan enters the 21st century with a new emperor, this title continues to be an indispensable guide through often enigmatic and historical idiosyncrasies of Japanese culture and politics that are often confusing to the outsider. This title includes information on the latest social developments, customs, rituals, business culture, medicine and arts.

Designed as a textbook for undergraduate students in various engineering disciplines—Mechanical, Civil, Industrial Engineering, Electronics Engineering and Computer Science—and for postgraduate students in Industrial Engineering and Water Resource Management, this comprehensive and well-organized book, now in its Second Edition, shows how complex economic decisions can be made from a number of given alternatives. It provides the managers not only a sound basis but also a clear-cut approach to making decisions. These decisions will ultimately result in minimizing costs and/or maximizing benefits. What is more, the book adequately illustrates the concepts with numerical problems and Indian cases. While retaining all the chapters of the previous edition, the book adds a number of topics to make it more comprehensive and more student friendly. What's New to This Edition • Discusses different types of costs such as average cost, recurring cost, and life cycle cost. • Deals with different types of cost estimating models, index numbers and capital allowance. • Covers the basics of nondeterministic decision making. • Describes the meaning of cash flows with probability distributions and decision making, and selection of alternatives using simulation. • Discusses the basic concepts of Accounting. This book, which is profusely illustrated with worked-out examples and a number of diagrams and tables, should prove extremely useful not only as a text but also as a reference for those offering courses in such areas as Project Management, Production Management, and Financial Management.

Economic sanctions are increasingly important instruments of regulatory and foreign policy. This book provides a detailed study of the post-9/11 financial sanctions programmes in the US and Europe, examining the key regulatory and legal issues that confront businesses and related liability issues for third parties and individuals.

STEEL DESIGN covers the fundamentals of structural steel design with an emphasis on the design of members and their connections, rather than the integrated design of buildings. The book is designed so that instructors can easily teach LRFD, ASD, or both, time-permitting. The application of fundamental principles is encouraged for design procedures as well as for practical design, but a theoretical approach is also provided to enhance student development. While the book is intended for junior-and senior-level engineering students, some of the later chapters can be used in graduate courses and practicing engineers will find this text to be an essential reference tool for reviewing current practices. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Advanced Engineering Economics, Second Edition, provides an integrated framework for understanding and applying project evaluation and selection concepts that are critical to making informed individual, corporate, and public investment decisions. Grounded in the foundational principles of economic analysis, this well-regarded reference describes a comprehensive range of central topics, from basic concepts such as accounting income and cash flow, to more advanced techniques including deterministic capital budgeting, risk simulation, and decision tree analysis. Fully updated throughout, the second edition retains the structure of its previous iteration, covering basic economic concepts and techniques, deterministic and stochastic analysis, and special topics in engineering economics analysis. New and expanded chapters examine the use of transform techniques in cash flow modeling, procedures for replacement analysis, the evaluation of public investments, corporate taxation, utility theory, and more. Now available as interactive eBook, this classic volume is essential reading for both students and practitioners in fields including engineering, business and economics, operations research, and systems analysis.

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As the world population grows and places more demand on limited fossil fuels, renewable energy becomes more relevant as part of the solution to the impending energy dilemma. Renewable energy is now included in national policies, with goals for it to be a significant percentage of generated energy within the coming decades. A comprehensive overview, *Introduction to Renewable Energy* explores how we can use the sun, wind, biomass, geothermal resources, and water to generate more sustainable energy. Taking a multidisciplinary approach, the book integrates economic, social, environmental, policy, and engineering issues related to renewable energy. It explains the fundamentals of energy, including the transfer of energy, as well as the limitations of natural resources. Starting with solar power, the text illustrates how energy from the sun is transferred and stored; used for heating, cooling, and lighting; collected and concentrated; and converted into electricity. A chapter describes residential power usage—including underground and off-grid homes—and houses that are designed to use energy more efficiently or to be completely self-sufficient. Other chapters cover wind power; bioenergy, including biofuel; and geothermal heat pumps; as well as hydro, tidal, and ocean energy. Describing storage as a billion-dollar idea, the book discusses the challenges of storing energy and gives an overview of technologies from flywheels to batteries. It also examines institutional issues such as environmental regulations, incentives, infrastructure, and social costs and benefits. Emphasizing the concept of life-cycle cost, the book analyzes the costs associated with different sources of energy. With recommendations for further reading, formulas, case studies, and extensive use of figures and diagrams, this textbook is suitable for undergraduates in Renewable Energy courses as well as for non-specialists seeking an introduction to renewable energy. Pedagogical Features: End-of-chapter problems Numerous case studies More than 150 figures and illustrations A solutions manual is available upon qualifying course adoption

This text offers broad coverage of the many facets of industrial plastics, including the latest environmental issues in plastics recycling. Included are well-illustrated laboratory activities related to all major topics and are appropriate for various types of equipment. Each chapter includes a vocabulary list and series of questions to aid in student comprehension. Included are well-illustrated laboratory activities related to all major topics, and each chapter includes a vocabulary list, series of questions.

"For courses in engineering and economics" Comprehensively blends engineering concepts with economic theory " *Contemporary Engineering Economics* " teaches engineers how to make smart financial decisions in an effort to create economical products. As design and manufacturing become an integral part of engineers work, they are required to make more and more decisions regarding money. The Sixth Edition helps students think like the 21st century engineer who is able to incorporate elements of science, engineering, design, and economics into his or her products. This text comprehensively integrates economic theory with principles of engineering, helping students build sound skills in financial project analysis. Also Available with MyEngineeringLab This title is also available with MyEngineeringLab an online homework, tutorial, and assessment program designed to work with this text to engage students and improve results. Within its structured environment, students practice what they learn, test their understanding, and pursue a personalized study plan that helps them better absorb course material and understand difficult concepts. Students interested in purchasing this title with MyEngineeringLab should ask their instructor for the correct package ISBN and Course ID. Instructors, contact your Pearson representative for more information. "

For introductory engineering economics courses. Relate engineering economics to

students' everyday lives for theoretical and conceptual understanding Chan Park, author of the best-selling Contemporary Engineering Economics, tells the story of engineering economy with the more concise Fundamentals of Engineering Economics by relating concepts from class to students' everyday lives. This book provides sound and comprehensive coverage of course concepts while addressing both the theoretical and the practical concerns of engineering economics. Written to appeal to a wide range of engineering disciplines, the text helps students build skills in making informed financial decisions and incorporates all critical decision-making tools, including the most contemporary, computer-oriented ones. MyLab(tm) Engineering is not included. Students, if MyLab Engineering is a recommended/mandatory component of the course, please ask your instructor for the correct ISBN. MyLab Engineering should only be purchased when required by an instructor. Instructors, contact your Pearson representative for more information. Reach every student by pairing this text with MyLab Engineering MyLab(tm) is the teaching and learning platform that empowers you to reach every student. By combining trusted author content with digital tools and a flexible platform, MyLab personalizes the learning experience and improves results for each student.

Contemporary Engineering Economics, 5/e, is intended for undergraduate engineering students taking introductory engineering economics while appealing to the full range of engineering disciplines for which this course is often required: industrial, civil, mechanical, electrical, computer, aerospace, chemical, and manufacturing engineering, as well as engineering technology. This edition has been thoroughly revised and updated while continuing to adopt a contemporary approach to the subject, and teaching, of engineering economics. This text aims not only to build a sound and comprehensive coverage of engineering economics, but also to address key educational challenges, such as student difficulty in developing the analytical skills required to make informed financial decisions.

Engineering Economy is meant as an introductory course for undergraduate students, and it explains and demonstrates the principles and techniques of engineering economic analysis as applied in different fields of engineering.

Loans, foreign, economic conditions.

More than five years have passed since South Korea fell prey to the Asian financial crisis. Bringing together experts from Korea and a variety of other countries, this book aims to better understand the three stages of the Korean crisis: the onset, the policy reaction, and the economic response. Providing an integrated analysis of the event and its consequences, the chapters in the book consider the causes of the crisis, the response of the US government and International Monetary Fund, adjustments in the Korean monetary and fiscal policies, and the success of financial and corporate restructuring. The concluding chapters bring the story up-to-date, describing the aftermath of the crisis and assessing whether there has been sufficient reform to facilitate the country's recovery and growth. International and also Asian economists will find this a thoroughly accessible and illuminating book, as will specialists on Korea, political scientists and political economists.

Everyone interested in building a stronger business needs to understand and use the information captured in financial statements. In Managing by the Numbers, business education and accounting experts Chuck Kremer and Ron Rizzuto team up with open-

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book management authority John Case to demystify the numbers. They present a practical, common-sense approach to reading financial statements and to managing the three bottom lines of business financial performance: net profit, operating cash flow, and return on assets. The book features numerous exercises and examples (with associated templates available on the Web), a powerful new management tool known as “The Financial Scoreboard,” and an extensive glossary. Managing by the Numbers is an essential resource for entrepreneurs, business owners, managers, and anyone eager to improve their mastery of the financial side of running a business.

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