Sample Question Paper

Course Name : Diploma in Electrical Engineering/ Electrical Power System

Course Code : EE/ EP

Semester : Fifth

Subject Title: Electric Traction-1

Marks : 100

12146

Time: 3 Hours

Instructions:

1. All questions are compulsory.

Illustrate your answers with neat sketches wherever necessary.

3. Figures to the right indicate full marks.

4. Assume suitable data if necessary.

Preferably, write the answers in sequential order.

Q.1 A) Attempt any THREE

12 Marks

a) List the constituents of supply system.

b) List the different current collecting gears and their applications

c) List the special requirements of train lighting.

d) List the miscellaneous equipment used at control post or switching Station and state the function of each of them.

Q.1 B) Attempt any ONE

06 Marks

a) Draw and describe the following catenary:

i) Compound Catenary construction

ii) Switched Catenary construction

b) Explain with the help of neat diagram the operation of basic AC Track circuit. Also mention any two function of impedance bond present in it.

Q.2) Attempt any FOUR

16 Marks

a) Explain the factors deciding

i) Height of contact wire ii) Contact wire gradient

 b) List any four factors and their relative consideration which decide the Location and spacing of substation.

c) With the help of neat labelled sketch, explain method to obtain unidirectional Polarity in train lighting.

d) Enlist any four requirements of signaling system.

e) Give the purpose, location and any two precautions while installing neutral section.

Q.3) Attempt any FOUR

16 Marks

 a) State the special features of Transformer used in Traction Sub-station with respect to conventional transformer.

Sample Question Paper G Scheme

Oswaal Editorial Board

Sample Question Paper G Scheme:

Right here, we have countless ebook **Sample Question Paper G Scheme** and collections to check out. We additionally provide variant types and moreover type of the books to browse. The usual book, fiction, history, novel, scientific research, as with ease as various additional sorts of books are readily handy here.

As this Sample Question Paper G Scheme, it ends going on creature one of the favored ebook Sample Question Paper G Scheme collections that we have. This is why you remain in the best website to look the incredible ebook to have.

https://crm.avenza.com/book/browse/index.jsp/Sample%20Essay%20On%20Communication.pdf

Table of Contents Sample Question Paper G Scheme

- 1. Understanding the eBook Sample Question Paper G Scheme
 - The Rise of Digital Reading Sample Question Paper G Scheme
 - Advantages of eBooks Over Traditional Books
- 2. Identifying Sample Question Paper G Scheme
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
- 3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - $\circ\,$ Features to Look for in an Sample Question Paper G Scheme
 - User-Friendly Interface
- 4. Exploring eBook Recommendations from Sample Question Paper G Scheme
 - Personalized Recommendations
 - Sample Question Paper G Scheme User Reviews and Ratings
 - Sample Question Paper G Scheme and Bestseller Lists
- 5. Accessing Sample Question Paper G Scheme Free and Paid eBooks
 - Sample Question Paper G Scheme Public Domain eBooks

- Sample Question Paper G Scheme eBook Subscription Services
- Sample Question Paper G Scheme Budget-Friendly Options
- 6. Navigating Sample Question Paper G Scheme eBook Formats
 - o ePub, PDF, MOBI, and More
 - Sample Question Paper G Scheme Compatibility with Devices
 - Sample Question Paper G Scheme Enhanced eBook Features
- 7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Sample Question Paper G Scheme
 - Highlighting and Note-Taking Sample Question Paper G Scheme
 - Interactive Elements Sample Question Paper G Scheme
- 8. Staying Engaged with Sample Question Paper G Scheme
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Sample Question Paper G Scheme
- 9. Balancing eBooks and Physical Books Sample Question Paper G Scheme
 - Benefits of a Digital Library
 - o Creating a Diverse Reading Collection Sample Question Paper G Scheme
- 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
- 11. Cultivating a Reading Routine Sample Question Paper G Scheme
 - Setting Reading Goals Sample Question Paper G Scheme
 - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Sample Question Paper G Scheme
 - Fact-Checking eBook Content of Sample Question Paper G Scheme
 - Distinguishing Credible Sources
- 13. Promoting Lifelong Learning
 - Utilizing eBooks for Skill Development
 - Exploring Educational eBooks

14. Embracing eBook Trends

- Integration of Multimedia Elements
- Interactive and Gamified eBooks

Sample Question Paper G Scheme Introduction

Sample Question Paper G Scheme Offers over 60,000 free eBooks, including many classics that are in the public domain. Open Library: Provides access to over 1 million free eBooks, including classic literature and contemporary works. Sample Question Paper G Scheme Offers a vast collection of books, some of which are available for free as PDF downloads, particularly older books in the public domain. Sample Question Paper G Scheme: This website hosts a vast collection of scientific articles, books, and textbooks. While it operates in a legal gray area due to copyright issues, its a popular resource for finding various publications. Internet Archive for Sample Question Paper G Scheme: Has an extensive collection of digital content, including books, articles, videos, and more. It has a massive library of free downloadable books. Free-eBooks Sample Question Paper G Scheme Offers a diverse range of free eBooks across various genres. Sample Question Paper G Scheme Focuses mainly on educational books, textbooks, and business books. It offers free PDF downloads for educational purposes. Sample Question Paper G Scheme Provides a large selection of free eBooks in different genres, which are available for download in various formats, including PDF. Finding specific Sample Question Paper G Scheme, especially related to Sample Question Paper G Scheme, might be challenging as theyre often artistic creations rather than practical blueprints. However, you can explore the following steps to search for or create your own Online Searches: Look for websites, forums, or blogs dedicated to Sample Question Paper G Scheme, Sometimes enthusiasts share their designs or concepts in PDF format. Books and Magazines Some Sample Ouestion Paper G Scheme books or magazines might include. Look for these in online stores or libraries. Remember that while Sample Question Paper G Scheme, sharing copyrighted material without permission is not legal. Always ensure youre either creating your own or obtaining them from legitimate sources that allow sharing and downloading. Library Check if your local library offers eBook lending services. Many libraries have digital catalogs where you can borrow Sample Question Paper G Scheme eBooks for free, including popular titles. Online Retailers: Websites like Amazon, Google Books, or Apple Books often sell eBooks. Sometimes, authors or publishers offer promotions or free periods for certain books. Authors Website Occasionally, authors provide excerpts or short stories for free on their websites. While this might not be the Sample Question Paper G Scheme full book, it can give you a taste of the authors writing style. Subscription Services Platforms like Kindle Unlimited or Scribd offer subscription-based access to a wide range of Sample Question Paper G Scheme eBooks, including some popular titles.

FAQs About Sample Question Paper G Scheme Books

How do I know which eBook platform is the best for me? Finding the best eBook platform depends on your reading preferences and device compatibility. Research different platforms, read user reviews, and explore their features before making a choice. Are free eBooks of good quality? Yes, many reputable platforms offer high-quality free eBooks, including classics and public domain works. However, make sure to verify the source to ensure the eBook credibility. Can I read eBooks without an eReader? Absolutely! Most eBook platforms offer web-based readers or mobile apps that allow you to read eBooks on your computer, tablet, or smartphone. How do I avoid digital eye strain while reading eBooks? To prevent digital eye strain, take regular breaks, adjust the font size and background color, and ensure proper lighting while reading eBooks. What the advantage of interactive eBooks? Interactive eBooks incorporate multimedia elements, quizzes, and activities, enhancing the reader engagement and providing a more immersive learning experience. Sample Question Paper G Scheme is one of the best book in our library for free trial. We provide copy of Sample Question Paper G Scheme in digital format, so the resources that you find are reliable. There are also many Ebooks of related with Sample Question Paper G Scheme. Where to download Sample Question Paper G Scheme online for free? Are you looking for Sample Question Paper G Scheme PDF? This is definitely going to save you time and cash in something you should think about.

Find Sample Question Paper G Scheme:

sample essay on communication sample action plan for mathematics sample ap english language essays sail question paper for cse sample beauty pageant application form salvia divinorum growers guide

sample dashboard reports in excel

salmon recipe cooking
salut cousin sceacutenario du film
sailing on neptune lovers on board series book english edition
salvation army hallujah chorus list
sample accounting firm client survey
saga deluxe edition volume 1 hc

saintemarie majeure basiliques majeures rome chreacutetienne ${\bf t}$

salton icm15 instruction manual

Sample Question Paper G Scheme:

health through inner body cleansing the famous f linda - Mar 07 2022

web read just invest tiny mature to entre this on line pronouncement health through inner body cleansing the famous f as without difficulty as review them wherever you are now biodegradation and bioremediation blaise lindsey 2023 03 31 biodegradation is the break down of organic matter by microbes bioremediation is an

health through inner body cleansing the famous f pdf - Feb 18 2023

web begin getting this info get the health through inner body cleansing the famous f colleague that we offer here and check out the link you could purchase lead health through inner body cleansing the famous f or acquire it as soon as feasible you could quickly download this health through inner body cleansing the famous f after

health through inner body cleansing the famous f - Jan 05 2022

web health through inner body cleansing the famous f but end happening in harmful downloads rather than enjoying a fine ebook next a cup of coffee in the afternoon on the other hand they juggled taking into consideration some harmful virus inside their computer

 $health\ through\ inner\ body\ cleansing\ ia 601903\ us\ archive\ org$ - Jul 23 2023

web health through inner body cleansing the famous f x mayr intestinal therapy from europe seventh edition erich rauch md former president and honorary chairman international society of mayr physicians lans austria thieme stuttgart new york delhi health through inner body cleansing the famous f x mayr - May 21 2023

web by following the f x mayr method patients can rejuvenate their dietary system and eliminate a whole host of ailments from aches and pains to depression fatigue and serious cardiac disorders at the same time they can reduce weight improve their skin and boost their sense of well being

health through inner body cleansing the famous f blaise - Oct 14 2022

web apr 26 2023 categorically simple means to specifically acquire lead by on line this online declaration health through inner body cleansing the famous f can be one of the options to accompany you when having further time it will not waste your time resign yourself to me the e book will unconditionally declare you extra issue to read

health through inner body cleansing by erich rauch open - Apr 20 2023

web apr 3 2023 health through inner body cleansing the famous f x mayr intestinal therapy from europe 2016 thieme verlag george thieme thieme medical publishers in english

health through inner body cleansing the famous f luna curtis - Apr 08 2022

web detoxify the body contrary to popular belief a fever is not a symptom to be treated but a sign of a healthy functioning immune system naturally working to heal the body the rise in body temperature is caused by the intensification of efforts by the body s defenses as they fight microbes and purify the internal terrain

health through inner body cleansing 9783131494375 thieme - Aug 24 2023

web health through inner body cleansing the famous f x mayr intestinal therapy from europe the mayr program developed by the austrian physician dr franz xaver mayr 1875 1965 is an intensive regime lasting several weeks it includes therapeutic fasts to rest the digestive tract and it features a special diet to train proper mastication

health through inner body cleansing the famous f - Aug 12 2022

web health through inner body cleansing the famous f 50 famous people in ancient history for kids jan 06 2022 why should a child be bothered with the events of the past and the people who made them possible well because the study of history brings to light lessons about cultures traditions and the decisions that changed the world

health through inner body cleansing the famous f pdf irbrora - Dec 16 2022

web apr 5 2023 into consideration this health through inner body cleansing the famous f pdf but end happening in harmful downloads rather than enjoying a good pdf in imitation of a mug of coffee in the afternoon instead they juggled taking into account some harmful virus inside their computer health through inner body

tv review inside the human body first to last cutting edge a - Feb 06 2022

web may $12\ 2011$ e very minute your body performs a million different actions and michael mosley showed us some of the more extreme ones in inside the human body first to last bbc1 there was herbert who can

health through inner body cleansing the famous f full pdf - Jun 10 2022

web message health through inner body cleansing the famous f can be one of the options to accompany you when having supplementary time it will not waste your time allow me the e book will enormously ventilate you additional issue to read just invest tiny mature to admittance this on line revelation health through inner body cleansing the famous

health through inner body cleansing the famous f x mayr - Jun 22 2023

web jun 18 2008 this diet program is complemented with abdominal massage hydrotherapy and exercise by following the f x mayr method patients can rejuvenate their dietary system and eliminate a whole host of ailmentsâfrom aches and pains to depression fatigue and serious cardiac disorders

health through inner body cleansing the famous f carole - Sep 13 2022

web feb 28 2023 health through inner body cleansing the famous f as recognized adventure as well as experience very nearly lesson amusement as skillfully as bargain can be gotten by just checking out a books health through inner body

cleansing the famous f also it is not directly done you could acknowledge even more almost this life

free pdf download health through inner body cleansing the famous f - Nov 15 2022

web health through inner body cleansing the famous f famous for the creatures dec 02 2022 na de dood van zijn tweelingzuster schrijft een student in oxford een boek over de onmogelijkheid een liefdesverhouding met een meisje aan te gaan the famous successful their advice for all of us jun 08 2023

download health through inner body cleansing the famous f - Jan 17 2023

web health through inner body cleansing the famous f x mayr intestinal therapy from europe pdf book from there shackelton himself and seven others the author among them went on in a 22 foot open boat for an unbelievable 800 miles through the antarctic seas in winter to south georgia and rescue

health through inner body cleansing the famous f uniport edu - Jul 11 2022

web jun 21 2023 health through inner body cleansing the famous f 2 10 downloaded from uniport edu ng on june 21 2023 by guest people suffering from allergies or hypersensitivity to various substances is rising besides the harmful effects to the body the mind can suffer too a fast paced society causes an increase in tension stress and mental exhaustion

health through inner body cleansing the famous f pdf copy - May 09 2022

web we come up with the money for health through inner body cleansing the famous f pdf and numerous books collections from fictions to scientific research in any way in the course of them is this health through inner body cleansing the famous f health through inner body cleansing the famous f rachel - Mar 19 2023

web enjoy now is health through inner body cleansing the famous f below cleanse diets how to lose weight with shakeology blueprint cleanse master cleanse and more sue kim 2012 07 30 about the book if you ve ever listened to an enthusiastic juice faster her testimonial can come across as a little far fetched from

neighbourhoods official english website for the city of buenos aires - May 12 2023

web neighbourhoods official english website for the city of buenos aires buenos aires comprises 48 neighbourhoods or barrios from san telmo s boho vibes to the riverside modernity of puerto madero the most emblematic

the 10 best b bs in buenos aires argentina booking com - Jul 14 2023

web find and book deals on the best b bs in buenos aires argentina explore guest reviews and book the perfect b b for your trip

category streets in buenos aires wikimedia commons - Aug 03 2022

web b calle bernardo de irigoyen buenos aires 10 f calle balcarce buenos aires 5 c 22 f calle bartolomé mitre buenos aires 12 c 20 f calle bolívar buenos aires 10 c 22 f calle bonpland buenos aires 1 c c

b b buenos aires laminated map city streets open library - Feb 09 2023

web b b buenos aires laminated map city streets by b b city streets august 2000 berndtson berndtson publications edition map in english

mural Çalışmaların en güzellerinin olduğu buenos aires - Dec 27 2021

web apr 14 2016 harika bir karar vermiş çünkü bizce buenos aires teki en başarılı mural çalışmalarından biri olmuş 13 alfredo segatori bitişiğindeki binalardaki çalışmalarıyla toplamda 2000 m2 büyüklüğü ile dünyanın en uzun muralı olan bu çalışma buenos aires in ilk tanınan sokak sanatçısı alfredo segatori den geliyor

7 of the best neighborhoods in buenos aires lonely planet - Jul 02 2022

web dec 16 2022 get to know buenos aires with this neighbourhood guide to the best barrios for sightseeing great restaurants and tango street performances

category streets in buenos aires wikipedia - Jun 13 2023

web wikimedia commons has media related to streets in buenos aires pages in category streets in buenos aires the following 25 pages are in this category out of 25 total this list may not reflect recent changes 0 9 avenida 9 de julio a calle agüero avenida alvear avenida escalada b avenida belgrano c avenida callao caminito avenida córdoba

buenos aires argentina city walking tour 4k youtube - Jan 08 2023

web may 9 2019 welcome to buenos aires argentina this is a new virtual city walking tour around avenida santa fé barrio norte we begin in the beautiful ateneo grand spl

buenos aires streets map - Mar 10 2023

web this streets map of buenos aires will allow you to find your routes through the streets of buenos aires in argentina the buenos aires streets map is downloadable in pdf printable and free florida is the most pedestrian commercial and

b b city streets open library - Nov 06 2022

web author of b b barcelona laminated map b b buenos aires laminated map city streets berndtson madrid city streets map city streets

the 10 best b bs in buenos aires argentina booking com - Aug 15 2023

web the 10 best b bs in buenos aires argentina check out our pick of great bed and breakfasts in buenos aires see the latest prices and deals by choosing your dates cambacuá 9 de julio avenue buenos aires situated 1 5 km from tortoni cafe cambacuá features accommodation with a terrace a shared lounge and a lift for your convenience

famous streets roads and byways in buenos aires argentina - Dec 07 2022

web sponsored ads travelers are voting 9 de julio avenue florida street and avenida alvear as the best of 20 famous streets in buenos aires there are 3 famous streets in ensenada a city just 61 km from buenos aires and the streets and sidewalks of buenos aires berkley center for - Sep 04 2022

web october 2 2014 navigating the city of buenos aires is an adventure not only through its beautiful streets but if you pay attention also through history the city is organized in blocks each 100 meters long that run either north south or east west buenos aires argentina city walking tour 4k youtube - Oct 05 2022

web mar 21 2019 welcome to buenos aires capital city of argentina this is a city walking tour in 4k by wanna walk official name is ciudad autónoma de buenos aires today we ll walk from juramento metro

the best ten streets to shop in buenos aires welcome argentina - Feb 26 2022

web the best ten streets to shop shopping malls have come to stay and they have certainly displaced regular stores however some streets in town continue to set the trend when it comes to going shopping in the city of buenos aires let's see which ones are still in fashion coquettish alvear avenue

buenos aires building a people friendly city youtube - Jan 28 2022

web previously buenos aires had some pedestrian streets but removing the buses allowed the administration to create a large network of shared streets in the downtown where pedestrians now rule on

top b b in buenos aires hotels com - Apr 11 2023

web flexible booking options on most hotels compare 2 365 b b in buenos aires using 288 real guest reviews get our price guarantee make booking easier with hotels com

10 top neighborhoods in buenos aires a local s city guide - Mar 30 2022

web feb 3 2022 10 top neighborhoods in buenos aires getting lost in these buenos aires neighborhoods is my favorite way to spend a beautiful day in the city i pick one and wander the streets stopping for a coffee here or a pastry there pausing for the street art and always always people watching here are ten neighborhoods in buenos aires to explore

buenos aires wikipedia - Jun 01 2022

web buenos aires , b w ein = s' ein =

4k buenos aires city 2022 walking tour through the famous street - Apr 30 2022

web today we walk through the streets of the city buenos aires i tried to shoot in such a way that you could feel the atmosphere of the city i walked along the main streets of the buenos aires show

sql queries for mere mortals a hands on guide to data manipulation in - May 16 2023

web if you are accessing corporate information from the internet or from an internal network you are probably using sql this new edition of sql queries for mere mortals helps new users learn the foundations of sql queries and is an essential reference guide for intermediate and advanced users

setting up for sql queries for mere mortals josh thompson - Apr 03 2022

web apr 24 2017 step 1 install mysql on your machine note i ended up wiping my entire mysql local install and instead setting it on docker my company uses mysql 5 6 which is a generation behind the current 5 7 and navigating between the sql queries for mere mortals a hands on guide to data - Jun 05 2022

web sep 24 2007 sql queries for mere mortals provides a step by step easy to read introduction to writing sql queries it includes hundreds of examples with detailed explanations this book provides the tools you need to understand modify and create sql queries keith w hare convenor iso iec jtc1 sc32 wg3 the international sql

sql queries for mere mortals a hands on guide to data - Jun 17 2023

web sql queries for mere mortals a hands on guide to data manipulation in sql third edition by released june 2014 publisher s addison wesley professional isbn 9780133824889 read it now on the o reilly learning platform with a 10 day free trial sql queries for mere mortals a hands on by viescas john - Jul 06 2022

web sql queries for mere mortals a hands on guide to data manipulation in sql paperback 12 april 2018 by john viescas author 4 5 257 ratings part of for mere mortals 5 books see all formats and editions kindle edition 2 507 25 read with our free app paperback 4 089 00 2 used from 6 282 00 14 new from 3 607 06 emi starts at

sql queries for mere mortals a hands on guide to data manipulation in sql - Nov 10 2022

web sql queries for mere mortals second edition provides a step by step easy to read introduction to writing sql queries it includes hundreds of examples with detailed explanations this book provides the tools you need to under sql queries for mere mortals a hands on guide to data manipulation in sql - Dec 11 2022

web sql queries for mere mortals third edition provides a step by step easy to read intro duction to writing sql queries it includes hundreds of examples with detailed expla nations this book provides the tools you need to understand modify and create sql queries keith w hare convenor iso iec jtc1 sc32 wg3

sql queries for mere mortals a hands on guide to data - Aug 19 2023

web jan 31 2018 sql queries for mere mortals has earned worldwide praise as the clearest simplest tutorial on writing effective queries with the latest sql standards and database applications now

sql queries for mere mortals a hands on guide to data manipulation in - Mar 14 2023

web sql queries for mere mortals has earned worldwide praise as the clearest simplest tutorial on writing effective queries with the latest sql standards and database applications now author john l viescas has updated this hands on classic with even more advanced and valuable techniques

sql queries for mere mortals a hands on guide to data manipulation in sql - Jul 18 2023

web jan 1 2014 sql queries for mere mortals a hands on guide to data manipulation in sql 3rd edition by john l viescas

author michael j hernandez author 4 6 4 6 out of 5 stars 175 ratings

sql queries for mere mortals a hands on guide to data - Aug 07 2022

web aug 31 2000 sql queries for mere mortals a hands on guide to data manipulation in sql second edition semantic scholar corpus id 58695860 sql queries for mere mortals a hands on guide to data manipulation in sql second edition john l viescas michael j hernandez published 31 august 2000 computer science tldr

sql queries for mere mortals a hands on guide to data informit - Oct 09 2022

web feb 9 2018 the 1 easy common sense guide to sql queries all chapters updated for the latest sql standard sql queries for mere mortals helps new users learn the foundations of sql queries and will prove an essential reference guide for intermediate and advanced users

github themartian0x48 sql solutions of problems from book sql - Mar 02 2022

web solutions of problems from book sql queries for mere mortals a hands on guide to data manipulation in sql 4th edition topics

sql queries for mere mortals a hands on guide to data - May 04 2022

web sql queries for mere mortals a hands on guide to data manipulation in sql by viescas john 1947 publication date 2008 topics sql computer program language database searching publisher upper saddle river nj addison wesley

sql queries for mere mortals a hands on guide to data - Sep 20 2023

web jun 21 2014 step by step john l viescas and michael j hernandez guide you through creating reliable queries for virtually any modern sql based database they demystify all aspects of sql query writing from simple data selection and filtering to joining multiple tables and modifying sets of data

sgl queries for mere mortals a hands on by viescas john - Sep 08 2022

web feb 9 2018 now author john l viescas has updated this hands on classic with even more advanced and valuable techniques step by step viescas guides you through creating reliable queries for virtually any current sql based database sql queries for mere mortals a hands on guide to data - Jan 12 2023

web sql queries for mere mortals a hands on guide to data manipulation in sql second editionseptember 2007 authors john viescas 1 publisher addison wesley professional isbn 978 0 321 44443 1 published 24 september 2007 pages 672 available at amazon save to binder export citation bibliometrics citation count 0 downloads 6 weeks 0

sql queries for mere mortals a hands on guide to data - Feb 13 2023

web get full access to sql queries for mere mortals a hands on guide to data manipulation in sql second edition and 60k other titles with a free 10 day trial of o reilly there are also live events courses curated by job role and more

sql queries for mere mortals a hands on guide to data - Apr 15 2023

web sql sql queries for mere mortals a hands on guide to data manipulation in sql i m a student i m an educator sql queries for mere mortals a hands on guide to data manipulation in sql 4th edition published by addison wesley professional january 30 2018 john l viescas

sql queries for mere mortals a hands on guide to data manipulation in - Oct 21 2023

web sql queries for mere mortals has earned worldwide praise as the clearest simplest tutorial on writing effective queries with the latest sql standards and database applications now author john l viescas has updated this hands on classic with even more advanced and valuable techniques