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If you have completed or are soon to complete a bachelor’s degree in accounting you have already added many tools to your toolbox: financial accounting, tax, auditing, accounting information systems, and others. Allow me to make the case that governmental and not-for-profit (NFP) accounting should be added to your toolbox. There are two primary reasons you should add both governmental and NFP accounting. The first reason is the Certified Public Accountant (CPA) exam and the second reason is potential employment. A course specific to governmental and NFP accounting will provide the knowledge base you require.

**CPA Exam**

You may be aware that the CPA exam has four sections including 1) Auditing and Attestation, 2) Business Environment and Concepts, 3) Financial Accounting and Reporting, and 4) Regulation. The Financial Accounting and Reporting (FAR) section has four topic areas including I) conceptual framework and standard-setting for business and nonbusiness entities, II) select financial statement accounts, III) select transactions, and IV) state and local governments. Based on the American Institute of CPAs (AICPA) blueprint* of the new CPA exam the state and local government topic area is 5-15% of the FAR section. FAR areas I, II, and III include NFP content for an additional 5% of the FAR section.

FAR area IV, which covers state and local governments, includes four content groups: A) state and local government concepts, B) format and content of the financial section of the comprehensive annual financial report, C) deriving government-wide financial statements and reconciliation requirements, and D) typical items and specific types of transactions and events: measurement, valuation, calculation and presentation in governmental entity financial statements.

The state and local government content group (FAR area IV item C) refers to government-wide financial

*This article discusses the importance for new accountants to include governmental and not-for-profit accounting in their knowledge base. The two primary reasons are how it is tested in the CPA exam and the potential employment possibilities.*
New Accountants’ 11 Rules For Living...

Here is a list of 11 things that many high school and college graduates did not learn in school.

**Rule #1**
Life is not fair; get used to it.

**Rule #2**
The world won’t care about your self-esteem. The world will expect you to accomplish something BEFORE you feel good about yourself.

**Rule #3**
You will NOT make 40 thousand dollars a year right out of high school. You won’t be a vice president with a cell phone, until you earn both.

**Rule #4**
If you think your teacher is tough, wait until you get a boss. He doesn’t have tenure.

**Rule #5**
Flipping burgers is not beneath your dignity. Your grandparents had a different word for burger flipping; they called it opportunity.

**Rule #6**
If you mess up, it’s not your parents’ fault, so don’t whine about your mistakes, learn from them.

**Rule #7**
Before you were born, your parents weren’t as boring as they are now. They got that way from paying your bills, cleaning your clothes, and listening to you talk about how cool you are. So before you save the rainforest from the parasites of your parents’ generation, try “delousing” the closet in your own room.

**Rule #8**
Your school may have done away with winners and losers, but life has not. In some schools they have abolished failing grades; they’ll give you as many times as you want to get the right answer. This doesn’t bear the slightest resemblance to ANYTHING in real life.

**Rule #9**
Life is not divided into semesters. You don’t get summers off and very few employers are interested in helping you find yourself. Do that on your own time.

**Rule #10**
Television is NOT real life. In real life, people actually have to leave the coffee shop and go to jobs.

**Rule #11**
Be nice to nerds. Chances are you’ll end up working for one.

Excerpted from “Dumbing Down Our Kids: Why American Children Feel Good About Themselves But Can’t Read, Write or Add” by Charles J. Sykes.
As someone who’s spent most of my career at a Fortune 50 company, I’ve seen first-hand how technology is transforming the work – and the opportunities – for accountants.

I entered the profession by a side door: I was an international business major in college, and my first jobs were in marketing. Eventually, I took on roles that required finance and accounting skills, which led to my decision to get an MBA. That opened the door for me to pursue an opportunity at Johnson & Johnson, where I’ve been for more than 15 years.

Students graduating college today with an accounting or finance degree have many options available to them. While most college students learn a lot about public accounting, the world of management accounting – working inside an organization, like I do at Johnson & Johnson – offers rich opportunities for those interested in an accounting or finance career.

What do management accountants do? Essentially, they serve as strategic business partners within an organization – providing expertise in areas like budgeting, forecasting, performance management, internal control, strategic planning, and competitive analysis. Their job titles vary and can include positions like financial analyst and controller, budget analyst and treasurer, and even vice president, finance, and CFO.

The fact is, regardless of where they began their careers, most students who graduate with an accounting degree end up working in management accounting within just a few years. IMA estimates that as many as 75% of accounting jobs are in management accounting.

With the advent of new technology, many entry-level jobs are changing in accounting and finance. While machines and artificial intelligence (AI) are performing some of the more routine, automated tasks at the earliest career levels, opportunities are opening for roles that require a new set of skills, particularly those related to data analytics, robotic process automation (RPA), business intelligence, and more.

Below are stories of three young professionals who work in these “new” areas for accountants and who are moving beyond the numbers to find new ways to serve as trusted business partners.
Loreal R. Jiles  
RPA Product Owner,  
Upstream Finance  
BP  

Loreal Jiles makes things happen. She’s the perfect example of someone who creates opportunities and refuses to take the proverbial “no” for an answer. “Most jobs I’ve had, no one was there before I got there,” she says when describing her career so far.

Loreal has spent nearly 15 years at BP, where she’s been since she graduated college. She was an accounting undergraduate at Southern University and A&M College in Baton Rouge, La., and a member of the Honors College. She had numerous job offers after graduation and she chose BP, which had a three-year rotational program that enabled her to serve in three roles, one each year. “It offered great flexibility to try out different roles and gain exposure to lots of different jobs within the organization,” she explains. “It’s the perfect way to begin your career to learn what you like and what you’re good at.”

Loreal started off in exploration and production as a financial analyst and moved into various roles in areas like change management, joint venture and revenue auditing, and planning and performance – all the way up to her current one: robotic process automation (RPA) lead.

It’s a demanding job, requiring her to lead RPA globally for BP’s Upstream Finance organization. She started and grew the RPA program, including leading the RPA tool evaluation and selection as well as global ideation sessions to build the automation opportunity pipeline. Along the way, she recruited a team of Finance and IT professionals to help define prioritization criteria, performance metrics, and a risk register. During this time, she also earned her MBA from Tulane.

What did it take Loreal to get there? She advises that students cultivate some essential characteristics: “First, be results driven. You need to be able to point to the value that you’ve added. Second, be humble and recognize that you can learn from anyone. Third, become an effective communicator and hone your written and verbal skills. And fourth, make sure you understand the operational side of the business.”

She also notes that even if you’re not an RPA developer, you must work with people who are, so you’ve got to know what they’re talking about. For those who want to gain experience in RPA skills, she recommends free online resources: UiPath, for example, which is a leading RPA vendor that offers classes online. She also encourages training in Power BI and Tableau, two data visualization tools, that also offer online training.

“Get these skills and you open yourself up to the art of the possible. That way, you can take control over your own destiny,” she says.

CMA 2020 Exam

The CMA® (Certified Management Accountant) exam tests the skills that are in-demand by today’s top employers. The exam was updated in 2020 to better reflect the reality of working in today’s accounting and finance field – including covering the topic of technology and analytics. The CMA is a two-part exam that tests:

Part 1 – Financial Planning, Performance, and Analytics
• External financial reporting decisions (15%)
• Planning, budgeting, and forecasting (20%)
• Performance management (20%)
• Cost management (15%)
• Internal controls (15%)
• Technology and analytics (15%)

Part 2 – Strategic Financial Management
• Financial statement analysis (20%)
• Corporate finance (20%)
• Decision analysis (25%)
• Risk management (10%)
• Investment decisions (10%)
• Professional ethics (15%)

To learn more about the CMA exam, which students can take while still in school, visit www.cmacareers.org.
Fatema El-Wakeel, CMA
Finance Business Partner
Data Analytics
Jaguar Land Rover

There’s a saying: “Choose a job you love and you’ll never work a day in your life.” That adage certainly applies to Fatema El-Wakeel, who applies her fascination with technology and change management to add value to help her company, Jaguar Land Rover, make critical business decisions.

Fatema grew up in Egypt and earned her bachelor’s degree from Alexandria University. “I fell in love with numbers,” she says, which is why her first jobs were as an assistant financial planning manager for the Cairo International Airport, financial analyst at HP, and as a regional reporting manager at Hilton Worldwide. Early in her career, she also earned IMA’s CMA certification, which helped make her an even more desirable job candidate.

About six years ago, Fatema made a life-changing decision to relocate to the U.K. to earn her MBA. She enrolled at Manchester Business School and while earning her degree, she was doing a consulting internship where the client asked her about how to use Big Data and utilize analytics in their strategic planning.

“I had no idea what they were talking about, so I went to research it and literally didn’t sleep that night,” she explains. “I started reading about analytics and got completely hooked on it.” The result: She changed her MBA focus, dropped subjects, and decided to do her dissertation about building a framework for strategic Big Data implementation in companies.

That initiative and drive helped her to secure a post at Jaguar Land Rover after she completed her degree. Her first role was Strategy and Capacity Planning, where she did data modeling and visualization. She is now Finance Business Partner—Data Analytics, where she uses her in-depth consulting skills and business knowledge to lead the transformation efforts in Finance data analytics. A big part of the job is identifying strategic and operational projects, building internal capabilities, and presenting recommendations and findings to directors and senior managers across different departments.

One of the things she likes best about the field is that it’s not mature yet. “It’s always improving, like engineering and medicine, which makes it both exciting and challenging.” And the field definitely attracts a certain type of professional. “You need to be someone who’s comfortable with ambiguity and the unknown, and who’s OK with there not being one right way to reach an answer.”

Fatema’s own journey demonstrates her willingness to be open to new opportunities, but she also acknowledges that sometimes, “you have to change along the way as you learn from experience.” At the end of the day, though, her advice is simple: “Find something that excites you.”

In Christian’s work at Johnson & Johnson, he’s had the opportunity to interview and hire many accounting and finance professionals over the years. While technical skills are a must, here are some of the things he looks for in a job candidate:

- Intellectual curiosity with focus on continual learning and development
- Willingness to step out of your comfort zone
- Strong ethical principles
- Experience going the “extra mile” to achieve a desired goal
- Team player who can bring out the best in others
- Communication skills

Most of these skills can be cultivated – they’re qualities you can acquire and refine. Think about opportunities to practice and improve these attributes, on campus, at home, or in other activities.
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Some people like working for large multinational companies; others think they’re best suited for being their own boss. That’s Daniel Smith, who currently serves as the founder and head of innovation at Theory Lane LLC, which aims to “help CEOs understand what their CTO and other technical resources are truly capable of in this brave new digital world; as well as give practical, technical guidance on how the organization can use these capabilities to achieve their strategic vision.”

Daniel first became interested in the field in college, although when he started as a freshman at Coastal Carolina University, he planned to go on to medical school and become a doctor. About mid-way through his biology major, though, he realized he didn’t much like the subject, so he thought about switching to pharmacy. It was while he was taking his pharmacy prerequisites that he first took an economics course. “I really enjoyed it,” he recalls. “It’s applying math to people, and that’s precisely what I was interested in.”

Daniel eventually earned his BS in biology, but he also stayed on to earn his MBA, with an accounting and business concentration, and later, a CMA. Those interests, and their intersection with economics, led him to jobs in areas such as business intelligence, data science, and artificial intelligence. After leading successful data science initiatives at organizations across a variety of industries – including oil and gas, advertising, life/health insurance, military recruiting, automotive, manufacturing, mortgage servicing, and academia – Daniel decided to start his own company.

He’s well-suited for the job as a consultant, because it asks many open-ended questions. For him, it’s all about what he calls “looking at the fuzzy edges.” The best part of the work? “I get to go into an organization, learn what they want to do strategically, and find a way to move their digital capabilities forward to achieve that.”

Of the skills needed for such a field, Daniel offers this: “Fortunately, they’re not industry specific – they’re broad, portable skills that you can gain, and take, anywhere. But what you absolutely need is the ability to think synthetically – to bring together diverse areas of thought and synthesize them into a coherent solution.”

For students interested in pursuing a similar path, he makes a unique suggestion: “Find a problem that pertains to business, write about how you would solve it, and then put your analysis on your LinkedIn profile. Recruiters will see it, and it will show them your abilities and thought patterns. It can definitely give you a leg up, because it will show that you’re a creative problem solver.”
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I n the past, in the present, and in the future we have to live and work with people - the human being type of people. The types that we don't understand, that drive us crazy, that do and say the strangest things. The types that we immediately like, are fun to be around, seem to understand us, and are easy to be with. In our journey through life, we have met both types within our families, neighbors, schoolmates, and work colleagues. Understanding ourselves and understanding them is one key to a successful career and a happy family.

Have you ever walked past a person and thought to yourself, Gee, I like that person and immediately wanted to talk to them? Or, talked to someone and thought, Gee, I dislike them but really couldn't put my finger on why? You don't really know the person but yet something is there that pulls you in or pushes you away. Surely, during your school years with group projects and meeting lots of people, you have experienced this phenomenon. Whether we like someone or not isn't the point. What is important, especially in the workplace, is that we find a way to work together to accomplish the team/company goals.

Psychologists and counselors provide tools for us to get along by introducing personality profiles and assessments. The idea is that understanding our uniqueness and how we are inherently different from others in how we process information and perceive the world, will allow us all to, “just get along”. While this may be plausible but often hard to do, there are indeed other positive things that happen when we understand our differences and learn to speak the other person's language. We can communicate more succinctly by using unique words/phrases that are targeted to the uniqueness of that person's personality; in other words, in a manner that the person is more open to hear, thus providing opportunities to better convey information and perhaps even to motivate them.

Psychologists offer four personality types or characteristics that each of us possess to some degree. The uniqueness is that we lean more heavily on some categories than we do others. Once we have identified ourselves and know our tendencies, we can use this information to understand and get along with others, especially those we work with. The Myers Briggs is a popular personality profile technique that is useful for this purpose. But it requires a lengthy test and time to grade and graph the eight categories that have various combinations. There are many other types of assessments available online if you wish to pursue your personality more accurately. However, to save time, let’s self-identify and quickly proceed to learn how to use this knowledge.

Consider these four types of personalities and self-select the one that more accurately reflects what you are like.

The Organizer: likes details, dependable and responsible, works hard, hates clutter, analytical, logical, can be stubborn, hesitant to change, frugal, would rather work alone than on a team, and not the touchy feely type. In the extreme, this person has a place for everything and sometimes they even have color coded post-its for each chore posted on the refrigerator. Going on a trip with this person? Then, be sure to plan well in advance and have the route mapped out with gasoline and motel stops identified.
LEARN TO MAKE A DIFFERENCE

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Robert Day School of Economics and Finance
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Claremont, California
909.607.3377 | accounting@cmc.edu
The Leader: interested in the bottom line, hates to lose even more than he or she loves to win, extremely confident, loves to debate and argue, outspoken, can be sarcastic, likes to be in charge, loves to multi-task, impatient, rarely apologizes, and self-motivated. In the extreme, if you get near them be careful because they have to be right and it's all about them.

The Socializer: loves to have fun and laugh, works best on teams, takes things personally, empathetic and compassionate, great story-tellers, want to “fix” everyone else, may give silent treatment when they feel hurt or angry, talks too much, hates conflict and confrontation, over commits, and often feels guilty and responsible for others. Their motto is: “Why can’t we all just get along?”, as they really hate conflict. Also, willing to give you the shirt off their back if you need it.

The Innovator: likes to be around fun people, adapts easily to change, super energetic, loves to try new things, gets bored easily, shoots from the hip, idea generators, not well organized, speaks before they think, doesn’t like to be told what to do, doesn’t always follow through to the finish on all projects, moves to the beat of their own drum and wouldn’t have it otherwise, and oh yeah, likes attention. In the extreme you will find them dancing on tables (without being intoxicated), hugging and kissing people they just met, and suggesting that the department have a potluck every Friday.

The Organizer: let go and have a bit more fun, let people know what you want and what you need, be more open to change, try to be more spontaneous, and smile more often.

Leader: relax once in a while and realize that you are not always right, slow down and give people a chance to get on board, multi-tasking may keep you from finishing a project, and give others a chance to lead.

Socializer: you are responsible TO people not FOR people, learn to say “no” without guilt, hold others accountable, and remember you can’t always please everyone.

Innovator: slow down, otherwise you will miss the details, listen rather than plan on what you will say next, some situations require seriousness rather than fun, and focus on the topic at hand.

Let's put what we learned into action. We are going to form a team to complete a project. What category types do you want in your group? What roles will they play? The Leader will make sure we get the project done on time. The Organizer will make sure we dot the i’s and cross the t’s before we move on. The Socializer will make sure that we all get along and honor each other’s feelings. The Innovator, well, they will bring the donuts to each meeting and will offer new ideas that may be outside the box. Get the idea? Now what happens when everyone on the team is in the same category type? Depends on the type but, things may be overlooked, we may not agree on the end result, we may stay with the same old methods of getting things done, or we may be late or never complete the project.

How should we present our findings? To the Leaders and Organizers it will be best to use bullet statements. Get right to the point and don't waste time at meetings. To the Socializers and Innovators, tell a story of how we got others on board with the idea and of how we came to our conclusion.

Now let's motivate them.
The Organizers and Leaders are more "I" focused while the Socializers and Innovators are more “we” focused. With Organizers and Leaders, appeal to their sense of self and pride. “I am counting on you to get this project finished on time and on budget” and “I know you are the right person for the job” and lets motivate with, “How will you live with yourself if you don’t accomplish this task” Ouch! With the Socializers and Innovators, appeal to their commitment to teamwork and family. “Find ways to get your team working together to get this project finished on time and on budget” and “We need a team player for this job” and let's motivate with, “Your family will be disappointed if this task isn’t completed on time”. Ouch! Now that you understand this – self talk yourself to motivate you! "I will do this for me" or “I will do this so my family is proud of me”.

Remember, I mentioned that we all have a little bit of each category type but lean more into one over the others. Since we have all of them, practice using them all. Given the situation, identify which category you should go into to accomplish the task. Are you indecisive? Go into the Leader mode and make the decision. Are you too pushy or demanding? Go into the Socializer mode and ask how the other person feels. Not sure how others perceive you? Ask someone, they will be glad to tell you!

How powerful is this information? Just like everything else, it depends on how much you want to practice with it and how important you feel it is to your work and family life. Practice it, play with it, apply it, and find out!
Although blockchain technology has primarily been used in cryptocurrency transactions, the technology’s use in business and accounting has become increasingly prevalent. This article briefly explains blockchain technology, why its characteristics are beneficial in the accounting environment, and how they may change the nature of accounting. Current incorporations of blockchain technology by the Big 4 accounting firms are also discussed.

What is Blockchain?

Blockchain technology was originally developed as means by which financial exchanges could be made in the low trust environment of cryptocurrency to allow parties to exchange compensation without relying on third party institutions, such as banks. Unlike traditional means of conducting financial transactions via private third-party databases that keep track of the parties that own and owe monies, blockchain uses a distributed, decentralized ledger technology that is shared and viewable by every person or entity that is a party to a financial transaction.
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transaction. The financial ledger that is created by transactional processing is not kept in any one location, such as at the corporate headquarters of a bank, but is rather simultaneously synced and available to all associated parties. This form of computer networking, in which multiple computers are linked via the internet without requiring a central server, is known as peer-to-peer technology, and allows parties to conduct business directly, without requiring third party intermediaries.

Peer-to-peer technology makes blockchain information decentralized and readily viewable; however, another characteristic of the technology makes it very appealing in an accounting environment. Blockchain technology ensures that the shared, decentralized ledger is permanent and unalterable. Once a transaction is approved by all parties and entered in the blockchain system, it cannot be modified in any fashion or deleted. The technology is designed to lock blocks of data into place, which is referred to as a chain, by using hash identifiers that connect every block in the chain to the previous block. Hash identifiers are mathematically derived cryptographic codes that are unique to each block of transactions and are deterministic; meaning the data in the block determines the hash identifier. In simpler terms, the second block in a chain contains the hash identifier of the first block in the chain. The hash identifier of each block is specific to the data contained in the block and is permanently embedded in the next block in the chain. Using this “locking method”, any block’s data cannot be altered without simultaneously altering every single block in the chain because every block is connected to the first block by the unique hash identifier. Therefore, if any portion of the data in the block is changed, the hash identifier changes and will no longer match the next block in the chain. This characteristic ensures that every block is linked in an unchangeable, irreversible fashion to the very first block in the chain, otherwise known as the genesis block.

Changing all the blocks in a chain in an attempt to alter the data in one block without detection is a task that would require such a vast amount of resources that doing so is currently deemed essentially impossible. The mathematical calculations required to develop a hash for one block in the chain require a massive amount of computing power. Those who create the hashes in the blockchain currently used for Bitcoin and other cryptocurrency transactions are known as miners. Miners use specialized hardware known as application-specific integrated circuits (ASIC). ASICs are expensive and require a vast amount of electrical power to operate. So much electricity is required to run the vast network of computers that mine Bitcoin, that some have feared if blockchain technology ever takes off, the additional energy consumed could speed up global warming. Therefore, lack of transparency is not an issue. Because smart contracts are maintained virtually, they can greatly expedite the speed with which terms are agreed upon, transactions are commenced, and payment is made and received. Furthermore, because smart contracts are maintained

In addition to the benefit of creating a decentralized, open-access, tamper proof database, blockchain offers the potential for the use of smart contracts.

Blockchain’s Smart Contracts

In addition to the benefit of creating a decentralized, open-access, tamper proof database, blockchain offers the potential for the use of smart contracts. Smart contracts are agreements, available with certain technologies such as blockchain, wherein specialized software is used to expedite proof of contract performance and payment. These virtual agreements help simplify the exchange of anything of value between parties, including cash, property and services. Smart contracts record all the terms and conditions of an agreement and ensure that all parties involved see and agree to the terms and the conditions have been satisfied before payment is released. Therefore, lack of transparency is not an issue. Because smart contracts are maintained virtually, they can greatly expedite the speed with which terms are agreed upon, transactions are commenced, and payment is made and received.
In high school, Charles Mueller had an affinity for solving hard problems. Math and physics were his most favorite classes as he found solving problems to be quite interesting. So, it’s no surprise that he chose to major in Physics and minor in Mathematics at Michigan State University, from which he graduated in 2011. “I didn’t really know much about what I wanted to do my freshman year,” he recalls. “I just knew I really liked physics.”

Halfway through sophomore year, he made the decision that he would eventually go to graduate school, which he did after earning his MS in Physics from the University of Notre Dame in 2014 “I had the idea, as most do when they enter grad school, that this would lead me into academia, and this partly motivated my applications to grad school.”

He applied to about 10 grad school programs and gained admission into some of the best in the country like Northwestern and the University of Minnesota, but chose his alma mater, Notre Dame, at the urging and recruitment of his trusted school advisor. “For me, the stipend and opportunity were the best at Notre Dame for my goal of heading into academia.”

His focus would be particle physics.

Perhaps the highlight of Mueller’s career was as a graduate research assistant in Geneva, Switzerland working on the CMS experiment at the Large Hadron Collider at CERN, where he applied machine learning and large-scale computing to search for and observe rare particles from proton collisions. The team received the Nobel Prize in Physics in 2013 after observing the Higgs Boson (particle). “It was super exciting. I was part of a near 7,000-person team that discovered the new particle. I was working on analysis and it was pretty cool seeing it happen. Lots of scientists spend their careers looking for this particle and I was lucky to be in the right place, time and team that directly found this - it was pretty amazing.”

Mueller muses that for years since then, nothing new was found after searching in places where the theory pointed, which was their last hope for particle physics. The conclusion was that there are no more big discoveries to happen for a long time and the excitement faded; the prospects for interesting and exciting stuff were no longer there.

At Gogo, his work focuses on developing machine learning models for predictive maintenance of airborne electronics and statistical analysis of satellite network operations.
in blockchains, they cannot be hacked or altered once all parties have agreed to enter into the contract.

As an example of how a smart contract would function, consider the sale of a car. If Art wants to sell his car to Sue, Art can send Sue a smart contract with the specific terms and conditions of the sale that could include: Sue deposits specified payment for the car; payment is withheld from Art for a period of time until Sue receives and examines the car; once Sue approves receipt of the car and its condition, the funds are released to Art, and the title is released to Sue. Prior to any part of the agreement being executed, Art and Sue must both agree on the conditions of the contract. Once both parties accept the contract, the terms and conditions cannot be altered and as each condition is met, the smart contract automatically prompts the next step in execution such as release of payment or transfer of title. These steps help ensure both parties that they will receive the property and compensation exchanged.

Whether with simple transactions such as the sale of a car, or complex transactions such as the sale of a business, smart contracts have the potential to significantly alter the way people exchange goods, services and property. They offer parties the chance to engage in transactions quickly and safely in an environment that is fully transparent and secure. Smart contracts also stand to enhance efficiency by increasing both the speed and accuracy of execution, which can result in cost savings for all parties.

**Blockchain in accounting**

Blockchain technology has capabilities that could have wide reaching implications for the ways the accounting profession conducts business, performs audits, and combats financial statement fraud. Blockchain’s decentralized ledger system, wherein parties involved in transactions that affect the ledger can agree on a transaction’s existence and correctness before it is entered into a permanent unchangeable record, make the technology’s application to accounting and auditing seem revolutionary.

A great deal of time and resources are spent ensuring that accurate and reliable information is presented to end users via audited financial statements. Blockchain technology has the potential to upend the traditional accounting paradigm wherein financial information is kept and maintained by corporations who permit auditors to verify its accuracy and reliability before it is distributed to interested end users.

With this new technology, corporations could post all financial transactions on publicly available blockchains that make changes to corporations’ financial positions available in real time to all interested parties. The result would be that anyone could view corporations’ general ledgers and comprise financial statements based on existing accounting regulations or their own set of guidelines. Some even suggest that blockchain’s application in corporate accounting could give the financial information such reliability that it could minimize or eliminate the need for auditor assurance and mitigate accounting fraud.

However, developing a blockchain system that can provide the assurance currently derived from the audit and outsmart potential fraudsters is a proposition that is still in its infancy.

Although applying blockchain in the accounting environment is in many ways still in the early stages, corporations and accounting firms acknowledge blockchain’s potential for improving business processes in a wide variety of industries as well as the audit and assurance profession. Currently, all of the Big4 accounting firms have documentation addressing blockchain’s potential in the industry and have active blockchain projects.

For example, Deloitte advertises services centered on blockchain development, implementation, and management and Ernst & Young is currently partnered with digital product developer Guardtime and Microsoft to use blockchain to modernize the marine insurance industry. KPMG recently entered into a partnership with IBM, WalMart and Merck to test blockchain in the pharmaceutical industry and PricewaterhouseCoopers now offers the auditing of cryptocurrency transactions as one of its new services and is actively exploring blockchain technology as means of prospective employee credential verification.

In 2017, the American Institute of Certified Public Accountants and Chartered Professional Accountants of Canada published the non-authoritative guidance “Blockchain Technology and Its Potential Impact on the Audit and Assurance Profession”. The guidance acknowledges that blockchain has the potential to enhance the efficiency of the financial reporting and audit processes. The way blockchain stores transactions and data could permit auditors to apply more analytics and diminish the amount of time auditors spend at client locations. Additionally, auditors may be engaged to audit the actual technology to ensure its reliability and security. However, despite the potential advances blockchain may offer, its widespread application in an accounting and auditing context is still in the early stages. Regardless of the time and resources needed for blockchain technology to extensively affect business processes in the accounting profession, accountants need to be aware of its existence, current uses, and future potential if they are to best serve the wider business community.
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Learning to create a program is a skill that is not taught as a requirement in many account curriculums; however, it is a vital skill that students can use to provide benefits to them in their career, differentiate themselves in the workplace, and gain a great deal of satisfaction from creating something that will help them in their job. There are a variety of places to learn to code with college courses, online free or nominal cost courses, or other resources contained on the Internet. While there are a few programming languages to choose from, Python and Java are two of the most popular; however, if a significant work is going to be done in an Office application (e.g., Excel), then Visual Basic for Applications should be considered.

Years ago, learning how to program (i.e., coding) was a required part of the curriculum in many accounting programs. Over time, pressures from the growing body of accounting knowledge that needed to be contained within the accounting curriculum as well as other factors forced accounting programs to remove this course and relegate it to those pursuing interests in computer science degrees or those who desired to supplement their required accounting courses with a programming course. While this is still the case, the benefit for accounting students to have this skill today is growing as accountants are now faced with more challenges utilizing the technology at hand to grapple with vast amounts of data in order to make decisions.

Knowing a programming language to some degree can provide tangible benefits to you in your career as you work with a
variety of data, but you don’t have to be-
come a full-time programmer in order to
reap the benefits. One of the main uses of
these skills is automating repetitive tasks,
which for a lot of business processes have
evolved over time and now are a mix of hu-
man effort and some form of technology
(e.g., spreadsheet or database software).
With coding skills, you will have the fore-
sight and ability to continue the evolu-
tion by altering this mix to involve more
efficient uses of existing technology and a
significant reduction of repetitive human
effort. In addition, being able to code can
enable you to see a way to accomplish tasks
that otherwise you would not consider.
Even if the level of coding is beyond your
current capability, you would have the abil-
ity to see things that others do not.

Knowing how to code can also differ-
entiate you from your peers as you seek
an accounting position. It can offer you a
competitive advantage as this is not a com-
mon skill obtained in most accounting
programs. With it, you can add to the in-
terviewing discussion about how it can be
used to benefit your prospective employer.
For those already in a position (e.g., an in-
ternship), it can provide a way for you to
excel in your current position, which can
make you stand out among your colleagues
when other positions become available
(e.g., a full-time position or promotion).

A few years ago, I had a student who
had been in the workforce a year or so af-
after he had graduated and found himself in
an environment where he was having to
do a very repetitive task in Excel that was
taking him a significant number of hours
to complete. This was a legacy process
that was given to him in his current job
function. He remembered part of a lecture
where I specifically mentioned learning
programming skills to automate repeti-
tive tasks in Excel. While we didn’t do any
specific assignment to demonstrate this
concept, he got the point of the conversa-
tion. Later, while he was working, he sent
me an email to see if I would be willing
to help him find some way to reduce the
repetitive nature of the process. Over the
next few days and just a few lines of code,
we were able to develop a short program
that would relieve him of the redundancy
he was facing. When presented to his em-
ployer, they were very impressed with his
results, but more importantly, the impact
that it would make going forward in the
reduction of the time it would take to
complete the task in the future.

A big question for most is where to
start. Many colleges offer introductory
programming courses that can offer you
a structured way to learn with deadlines,
assigned tasks to complete, and exams.
These have the advantage of moving at a
reasonable learning pace accompanied by a
degree of accountability. Depending on the
accounting curriculum, students may have
an elective where a programming course
could be used to fulfill an existing part of
their curriculum without adding any addi-
tional courses. Others who need to obtain
additional hours beyond their undergradu-
ate degree to meet licensure requirements,
may consider this a course they could take.
Many of these courses are offered online,
which will allow a more flexible learn-
ing approach as opposed to on-campus
courses. There are other non-credit courses
at colleges that one might consider (i.e.,
some form of extended learning program)
or a vast number of other online courses or
resources that are either free or offered at
a nominal cost (e.g., Lynda.com. Udemy,
Coursera, and others via a Google search).

As you start a search for courses, the
next question that becomes pertinent is
what language should you learn? Some of
the more popular languages are Python
and Java; however, also consider Visual
Basic for Applications (VBA), which is
the programming language already con-
tained in Excel as well as other Office ap-
lications. If much of your work is done
within the Office suite of applications,
VBA does have an advantage as being
the native language, and it doesn’t require
downloading any additional software.

Learning to code and creating a pro-
gram will give you a sense of self-satisfac-
tion when you have achieved the purpose
for the program. Whether it is doing
something entirely new for the first time
or taking an existing process and automat-
ing part or all of it, the feeling of creating
something that increases your efficiency
and productivity is a reward in and of itself.

“Having to be surgically removed from your chair leads
me to believe you have spent a great deal of time
studying for your CPA exam.”
statements because two sets of financial statements are required to be reported in the comprehensive annual financial report (CAFR). Government accounting is segregated into various self-balancing funds. An individual fund involves the accounting for a specific financial activity within the government. Governmental requirements define which activities are accounted for within each fund type. Individual funds record the inflow and outflow of financial resources.

Fund level financial statements are included in the CAFR. In addition to the fund financial statements the CAFR also includes government-wide financial statements. The government-wide financial statements are fully classified. A reconciliation is provided in the CAFR that reports the differences between the fund financial statements (modified accrual) and the government-wide financial statements (full accrual).

Because the role of government is service oriented, financial activity and position are not the only reporting requirements. The CAFR includes both a management discussion and analysis section and a required supplementary information section. Demographic, capacity, and statistical information is emphasized in addition to financial resources. Costs and revenues per capita are often reported. This provides a common measure for comparison between governmental units.

Similar to governmental accounting, the role of a NFP is also service oriented. As with governmental reporting NFPs provide both financial and statistical information in their annual reports. The ratio of program expense to administrative and fund raising expenses is of great interest to many donors who want to know how much of their support goes towards the NFP’s purpose. Endowments can be a major source of continual financial resources where donations are non-spendable but the earnings off the endowment funds can be used for general or targeted activities. NFPs can be organized in several ways with varying tax implications.

**Employment**

The second reason to pursue governmental or NFP accounting is employment. Employment opportunities...
Under the UK’s Tax Avoidance Schemes Regulations 2006, it is illegal not to tell the taxman anything you don’t want him to know, though you don’t have to tell him anything you don’t mind him knowing.

In Boulder, Colorado, it is illegal to kill a bird within the city limits and also to “own” a pet – the town’s citizens, legally speaking, are merely “pet minders”.

In Alabama, it is illegal for a driver to be blindfolded while driving a vehicle.

In Montana, it is illegal for a driver to be blindfolded while driving a vehicle.

In San Salvador, drunk drivers can be punished by death before a firing squad.

In Florida, unmarried women who parachute on Sundays can be jailed.

In Vermont, women must obtain written permission from their husbands to wear false teeth.

In the UK, a man who feels compelled to urinate in public can do so only if he aims for his rear wheel and keeps his right hand on his vehicle.

In Kentucky, it is illegal to carry a concealed weapon more than six-feet long.

In the UK, it is an act of treason to place a postage stamp bearing the British monarch upside down.

Did you know it’s illegal in France to name a pig Napoleon? Or that in Ohio you’re not allowed to get a fish drunk?
include positions either internal or external. Internal positions in governmental accounting involve various organizational levels including federal, state, county, city, or school district governmental units. At the federal level the U.S. Governmental Accountability Office (GAO) provides auditing, evaluation, and investigative services for the United States Congress. The Federal Bureau of Investigation hires forensic accountants to investigate financial activities. At the state level the Office of the State Auditor provides financial auditing, operational auditing, pension reviews, tax reviews, investigations of theft or misuse of public funds, and coordinates reporting of state financial data.

External governmental positions include tax, audit, and advisory services. Depending on your state of residence external auditors may provide advisory or audit services to counties, cities or school districts. NFP entities may also require external advisory, tax, or audit services. For some CPA firms a large portion of their practice is tied to governmental or NFP clients. To be hired CPA firms may not require you to have education in governmental or NFP accounting, but the learning curve will be less steep if you have acquired the fundamentals prior to employment.

Conclusion

This article scratches the surface of the differences between the for-profit accounting you are used to and the accounting for governmental and NFP organizations. Taking a course specific to governmental and NFP accounting is encouraged. CPA review materials will include governmental and NFP content, which will be most helpful if you already have a background in the material. As discussed, around 20% of the FAR section of the CPA exam is government and NFP. In addition, you may want to consider the internship and employment opportunities that governmental and NFP organizations provide. I hope you will consider this area of accounting as you prepare to enter and begin to manage your career in the accounting profession. And I wish you well on the FAR section of the CPA exam.

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