COMPUTER CHALLENGES pdf

1: Human-Computer Go Challenges

The Great Computer Challenge is a joint project of WHRO, the Consortium for Interactive Instruction and Old Dominion University! This is a competitive opportunity for students in Kindergarten through 12th Grade to demonstrate their knowledge of various computer applications and programming skills.

Katz Most litigation support staff understand the basic challenges of electronic discovery. However, while many forensic methods are used in e-Discovery, computer forensics is a unique discipline. The essence of all forensic disciplines concerns the principles applied to the detection, collection, preservation, and analysis of evidence to ensure its admissibility in legal proceedings. Computer forensics refers to the tools and techniques to recover, preserve, and examine data stored or transmitted in binary form. The potential of computer forensics has been almost always confined to criminal cases, but it can be very useful in civil cases, as well. The biggest mistake litigation support personnel make in evaluating their need for forensics is looking to their internal IT departments for forensic support. In the context of civil litigation, computer forensics are most frequently used in the collection of evidence. Forensics experts are trained in acquisition methods that ensure the authenticity of evidence. The forensics expert will gather the information from the computer using special hardware and software tools that will ensure no changes to the data stored on the computer. In many litigation matters, evidence is collected by in-house IT staff, and not by forensics experts. This method of collection always results in the loss of some metadata. This metadata is not always material to the lawsuit; however, the best way to ensure that evidence collected is forensically sound and admissible in court is to have evidence collected by forensics experts or technicians trained in forensic acquisition methods. The Electronic Discovery Reference Model EDRM does not specifically require forensic collection, but forensic collection, whether of a full hard drive or simply logical files, works well for the collection phase of the EDRM. Forensic analysis can obtain considerable information from a hard drive. It is often possible to recover deleted files and, in many cases, even deleted and reformatted partitions. The date that a file was created, by whom, when it was changed, if it was copied off to an external drive, or if it was sent in email are all possibly recoverable. Forensic techniques can often identify and break encryption or find information that was hidden deliberately with tools like steganography hiding documents in pictures. In addition to criminal cases, forensic analysis can be useful in a number of civil cases, particularly if there are issues of fraud, if timing is critical, or if lost documents are needed. Forensic analysis can be very useful in cases of intellectual property theft and in actions for wrongful termination. Finding Forensic Experts Most litigation support personnel are very familiar with methods for finding experts. One additional consideration for forensics are forensic-specific certifications. There are a number of certifications, both third party and from vendors. The Encase Certified Forensic Examiner is a vendor certification but well regarded because it involves both a written and a practical exam and because Encase is the most frequently used forensic acquisition and analysis software. This is the belief that many people get from watching CSI on TV that forensics is infallible and instantaneous. Computer forensics is incredibly powerful in its own way, but it is often painstaking and tedious. The analyst often must spend hours studying a hard drive, looking at hexadecimal code, counting the bits and bytes forward and back, in order to find the hidden information. If a password is involved and it is cracked, that is usually just a starting point for investigation. Many times the IT staff will want to look at a hard disk with data recovery tools, but they are not forensics analysts. One of the ways in which evidence is often damaged is when IT staff start poking through disks without using write blockers. IT staff lack the training to get the information while leaving the original intact, and they lack the training to do in-depth analysis. They may know quite a bit about file systems, but they are unlikely to have had the in-depth training into all the virtual crevices on a hard drive that would be the province of a forensic analyst. Conclusion Whether using it as part of e-Discovery or as a key tool in proving a case, computer forensics can be extremely valuable in litigation. The key is to use forensic collection methods, be aware of what forensic analysis can provide, be aware of what it cannot provide, and make use of the right experts. She can be reached at , slkatz eclaris. For more information, visit www.

2: SRU Computer Science: Challenges of Computer Technology

Past computer-computer results | future events | www.enganchecubano.com Human-Computer Go Challenges This page lists Go matches between humans and Go-playing programs.

Thursday, September 17, The Fundamental Challenge of Computer System Performance The fundamental challenge of computer system performance is for your system to have enough power to handle the work you ask it to do. It sounds really simple, but helping people meet this challenge has been the point of my whole career. Workload is the work your computer does, in the form of programs that it runs for you, executed over time. Workload is the content that can fill the capacity box. When the workload gets too close to filling the box, what do you do? We call that the KIWI response: Upgrades cost more than just the hardware itself: Your software may cost more to run on faster hardware. What if your system is already the biggest and fastest one they make? There are classes of performance problems that adding capacity never solves. Yes, it is possible to predict when that will happen. KIWI is not always a viable answer. So, What Can You Do? Performance is not just about capacity. Though many people overlook them, there are solutions on the workload side of the ledger, too. What if you could make workload smaller without compromising the value of your system? It is usually possible to make a computer produce all of the useful results that you need without having to do as much work. You might be able to make a system run faster by making its capacity box bigger. But you might also make it run faster by trimming down that big red workload inside your existing box. So, how might one go about doing that? It is useful to think about those two words separately. The amount of work your system does for a given program execution is determined mostly by how that program is written. A lot of programs make their systems do more work than they should. Your load, on the other handâ€"the number of program executions people requestâ€"is determined mostly by your users. Users can waste system capacity, too; for example, by running reports that nobody ever reads. Both work and load are variables that, with skill, you can manipulate to your benefit. You do it by improving the code in your programs reducing work , or by improving your business processes reducing load. I like workload optimizations because they usually save money and work better than capacity increases. Workload optimization can seem like magic. The Anatomy of Performance This simple equation explains why a program consumes the time it does: Call count, then, is the number of instructions that your system executes when you run a program, and call latency is how long each instruction takes. How long you wait for your answer, thenâ€"your response timeâ€"is the product of your call count and your call latency. Call count depends on two things: How the code is written work â€" If you were programming a robot to shop for you at the grocery store, you could program it to make one trip from home for each item you purchase. If you found yourself repeatedly discarding spoiled, unused food, you might be able to reduce the number of things you shop for without compromising anything you really need. Call latency is influenced by two types of delays: Queueing delays â€" Whenever you request a resource that is already busy servicing other requests, you wait in line. The more work your robot does, the greater its chances of being delayed by queueing, and the more such delays your robot will inflict upon others as well. Coherency delays â€" You endure a coherency delay whenever a resource you are using needs to communicate or coordinate with another resource. This causes response time to act not like a line, but instead like a hyperbola. And not just computer performance. Banks, highways, restaurants, amusement parks, and grocery-shopping robots all work the same way. Response times are trememdously sensitive to your call counts, so the secret to great performance is to keep your call counts small. This principle is the basis for perhaps the best and most famous performance optimization advice ever rendered: The First Rule of Program Optimization: The Second Rule of Program Optimization for experts only! Jackson The Problem Keeping call counts small is really, really important. This makes being a vendor of information services difficult, because it is so easy for application users to make call counts grow. They can do it by running more programs, by adding more users, by adding new features or reports, or by even by just the routine process of adding more data every day. Running your application with other applications on the same computer complicates the problem. The Solution The solution is a process: Call counts are sacred. They can be difficult to forecast, so you have to measure them continually. Hire people who understand it. Hire people who know how to measure and improve the efficiency of your application programs and the systems they reside on. Give your people time to fix inefficiencies in your code. An inexpensive code fix might return many times the benefit of an expensive hardware upgrade. If you have bought your software from a software vendor, work with them to make sure they are streamlining the code they ship you. Learn when to say no. If you are an information service provider, charge your customers for the amount of work your systems do for them. The economic incentive to build and buy more efficient programs works wonders.

3: Computer Forensics Analysis Challenges - Computer Forensics Recruiter

The "Building an Operating System for Computer Science" (OS4CS) study was designed as a collaborative research and communication effort to establish a more comprehensive understanding of our nation's current high school computer science (CS) teaching population, the support they have, and contexts in which they teach.

Session Multiplexing Connection Pooling When thousands of clients are running interactive Web applications, many of these sessions may be idle at a given time. The connection pooling feature enables the database server to timeout an idle session and use the connection to service an active session. The idle logical session remains open, and the physical connection is automatically reestablished when the next request comes from that session. Therefore, Web applications can allow larger numbers of concurrent users to be accommodated with existing hardware. Figure shows how connection pooling works. In this example, the Oracle database server has been configured with connections. One of the clients has been idle past a specified amount of time. Connection pooling makes this connection available to an incoming client connection, which is the th connection. The session multiplexing feature reduces the demand on resources needed to maintain multiple network sessions between two processes by enabling the server to use fewer network connection endpoints for incoming requests. This enables you to increase the total number of network sessions that a server can handle. One Oracle Connection Manager with multiple gateways enables thousands of concurrent users to connect to a server. When Oracle Connection Manager is run on the same computer as an application Web server, the application Web server can route multiple client sessions through Oracle Connection Manager to ensure that those sessions have continuous access to an Oracle database server. This functionality is especially useful for Web applications where session availability and response time are major concerns. SDP is an industry-standard wire protocol intended for use between Infiniband network peers. The result is a low-latency , increased bandwidth, high-throughput connection that reduces the amount of CPU cycles dedicated to network processing. The communication between clients, including Oracle Application Server OracleAS or any other third-party middle-tier client, and an Oracle Database 10g database can take advantage of high-speed interconnect benefits. The SDP requests are then sent to an Infiniband switch that processes and forwards the requests from the OracleAS servers to the database server. Granting and denying access to a database is crucial for a secure network environment. Oracle Net Services enable database access control using features described in the following topics: Protocol Access Control Firewall Access Control Oracle Connection Manager can be configured to grant or deny client access to a particular database service or a computer. By specifying filtering rules, you can allow or restrict specific client access to a server, based on the following criteria: Source host names or IP addresses for clients Destination host names or IP addresses for servers Destination database service names Client use of Oracle Advanced Security Figure shows an Oracle Connection Manager positioned between three Web clients and an Oracle database server. Oracle Connection Manager is configured to allow access to the first two Web clients and to deny access to the third. Figure Intranet Network Access Control with Oracle Connection Manager Description of "Figure Intranet Network Access Control with Oracle Connection Manager" Although Oracle Connection Manager cannot currently be integrated with third-party firewall products, vendors can package it with their own products in a way that enables this product mix to serve as an application gateway. Figure shows an application gateway controlling traffic between internal and external networks and providing a single checkpoint for access control and auditing. As a result, unauthorized Internet hosts cannot directly access the database inside a corporation, but authorized users can still use Internet services outside the corporate network. This capability is critical in Internet environments to restrict remote access to sensitive data. These parameters specify whether clients are allowed or denied access based on the protocol. A Suite of Networking Components The connectivity, manageability, scalability, and security features described in this chapter are provided by the following components:

4: Algorithms | Computer science | Computing | Khan Academy

The other is the challenge to make computer technology available to every visually handicapped person who wishes to use it, not just the chosen few. With a computer, visually impaired students can prepare lessons and papers independently.

The OS4CS study has five major components: While each component of the study can be examined independently, when considered together they complement each other, providing a broad view of the issues affecting CS education as viewed through the lenses of different stakeholders. The study includes perspectives from teachers, PD providers, school administrators, community leaders, and others. This section highlights five major challenges that repeatedly surfaced across the five study components. The order of the challenges presented below is not an indication of importance or priority; all are important to consider in efforts to improve the state of K CS education. There is no shared understanding of what computer science is Computer science has no commonly accepted definition; teachers, students, school leaders, and PD providers, interpret it in different ways. Some view computer science as computer applications; others consider it programming; and still others describe it as logic, modeling, and problem-solving. These different points of view contribute to a lack of coherence in the instructional resources and supports provided for teachers, and inconsistency in instruction, the information communicated to parents, and policy decisions made by school administrators. These different points of view make it challenging to set the goals and metrics necessary to spread CS teaching, learning, and leading with intentionality and clarity. It should invest in the development of robust measures of student learning, and use these to help describe what quality CS teaching and learning looks like. To build the foundation, the CS education community needs to develop widely agreed upon standards for student CS learning and ways to measure them. This would guide CS educators toward quality curricula, assessments, professional development, and teaching practices, and in turn enable them to clearly communicate about and advocate for CS education. CS teachers do not have access to the range of quality instructional resources that teachers of other subjects enjoy. Support development of comprehensive instructional materials. Like other subjects and in many cases even more so, students entering CS courses typically bring with them vastly different backgrounds and levels of experience. A variety of instructional resources will support schools and teachers in making decisions about how best to meet the needs of their CS students. These instructional materials should reflect the growing knowledge about how students learn and be informed by knowledge about design and implementation of instructional resources on a large scale, though more research is needed about CS-specific aspects of these. In other disciplines, well-designed instructional materials not only help students learn, but also help teachers improve their practice. Instructional materials will support more specific, job-embedded teacher professional development and provide teachers with assessment tools that can inform their teaching on a daily basis. Computer science is not prioritized in schools There is little incentive for schools and districts to include CS courses. There are no requirements at the college level, few state requirements, and the basic course materials computers are expensive to purchase and maintain. The decision to include CS courses falls to individuals at the school or district level. Coupled with the lack of instructional materials, this can result in vastly different experiences for students across the country. Establish policies that enable schools and districts to prioritize CS coursework so that all students have access to quality CS education. There is a need for more computer science teachers There are few pathways to become a CS teacher. Individuals with CS experience have many career options other than teaching. Those with an interest in teaching will find more resources, education leading to certification, and support in other related subjects such as mathematics. In the short and medium term, develop and deploy strategies to help existing teachers become excellent CS teachers. In the long term, one can expect that when CS courses are prioritized and accompanied by robust standards, curricula, and teacher professional development, CS teaching will emerge as a viable path. These changes may increase the number of teachers entering into CS teaching careers. The lack of colleagues as collaborators and sources of new information about CS instruction is then compounded by the low prioritization of CS in schools, the lack of instructional materials, and the lack of criteria for quality CS instruction. This makes improving their instruction more difficult and can affect motivation. Dedicate resources to build and sustain online and face-to-face networks for CS teaching, learning, and leading, including teachers, schools, and PD providers. If well designed, such networks have the potential to support improvement across school, district, and state lines. It has been a privilege and pleasure to engage with the computer science community developing the components of our study: We are hopeful that the work we have done will create a foundation for next steps and that we can continue to work within the community to realize that goal. We came to this work with collective decades of experience with mathematics and science education, teaching, research, evaluation, administration, policy-making, and scientific research, but with little knowledge of computer science education and the computer science education community. This kind of collaboration and openness is not to be taken for granted and we appreciate the support the community provided. As we reflect on this particular piece of work as it comes to a close, we look forward to continuing to work with this inspiring community. Over the next few months and years, we hope all of us can keep the following in mind: History shows that destructive debates about the content and pedagogy of mathematics teaching and learning stifled progress for schools and students. Likewise, science education has suffered from a lack of prioritization and insufficient clarity of purpose. The computer science community can avoid a similar history by bringing clear, coherent, committed messages about computer science education to policy makers, the public, and other decision makers. A unified voice and aligned actions from all aspects of the community â€” practicing scientists, researchers, university faculty, teachers, foundations, and corporate interests â€” is essential. Computer science education is beginning to take off, benefitting from a population enamored with parts of the technology industry â€" much like science education was moved into the public consciousness with Sputnik. With this support, it may be easier to convince districts and states to give computer science education more attention. More attention, however, does not equal higher quality â€" and sometimes works against it. Without that clarity, others will bring their own meanings and agendas to the discussion. Now is the Time: There is a groundswell of energy, commitment and momentum for computer science teaching, learning, and leading. Having watched trends come and go in other disciplines, we see this as an unprecedented opportunity to establish norms for computer science education for all. Given the newness of the discipline, setting the right foundation now will pave the way for tremendous gains in the future â€" something that the contemporary mathematics and science education communities never had the opportunity to do. Our hope is that this research is useful to the community. We welcome comments and questions at any time and look forward to continuing to work with you to move the computer science education agenda forward.

5: Grand Challenges - Grand Challenges for Engineering

Login issues If you cannot login, please check ID-number: make sure you use capital letters (press 'shift' button) and that all numbers are correct Date of birth: make sure you enter your correct date of birth using the drop-down lists If, after several attempts, you still cannot login, please report to your teacher.

6: Future Challenges in Computer Science | www.enganchecubano.com

Challenge #4: Manage and tame the complexity beast. 5: Obsolescence Everything from the PC you are using to the skills needed to perform your job seem to become obsolete in three to five years.

7: Coderbyte | The #1 Website for Coding Challenges

Locate, synthesize and evaluate information to communicate the challenges posed by computer technology through written papers (IS, IT majors) OR Locate, synthesize and evaluate information to communicate the challenges posed by computer technology through examination questions.

8: Networking Challenges in the Internet Age

12 Challenges Facing Computer Education in Kenyan Schools By Guest Writer on September 12, While ICT continues to advance in western and Asian countries, African countries still experience a lag in its implementation, and that continues to widen the digital divide and increase digital literacy challenges.

9: Cary Millsap: The Fundamental Challenge of Computer System Performance

Growing computer and communications technologies are opening up vast stores of knowledge and entertainment. As remarkable as these engineering achievements are, certainly just as many more great challenges and opportunities remain to be realized.

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Elementary and intermediate algebra book Hellfire in Haiti (Codys Army, No 6) Isnt debt-free the way to be? Oxford handbook of indian foreign policy There was an odd princess who swallowed a pea Leconte de Lisle and the historical imagination. Miss Julia renews her vows Managing More Effectively Classifying and managing products Nonproliferation and arms control assessment of weapons-usable fissile material storage and excess pluton On crusades and missions Essential mathematical biology The trick-or-treat trap Constraint-Induced Movement therapy With brush and pencil Introduction: Doctrine and the United States Army Immigration and American popular culture Humax fvp 4000t manual Sharepoint 2010 icon not showing in ument library Committees; acknowledgments. Renault clio service manual Economic reform and alternatives for North Korea Thomas F. Cargill and Elliott Parker Meditations on the rosary Importance of time management in students life The Den of Thieves Proactive yesterday , responsive today Pure mathematics i Life of Galileo : between contemplation and the command to participate Cathy Turner The Hairy brown angel and other animal tails Grace notes and other fragments III. March 4, 1874-June 28, 1880. The Mahabharata, Volume 2: Book 2: The Book of Assembly; Book 3 V. 2. Euphorbiaceae Dichapetalaceae Word Recognition and Meaning Vocabulary 2013 hyundai tucson owners manual D-Day: spearhead of invasion Nuclear Superiority 3./tCalling what is not a spade a spade 10. March 1774-June 1775 The bacteriology of swelled canned sardines