Computer algorithm tutorialspoint pdf

T3 Samsung Galaxy Tab S7+ review is here, and Apple iPad Pro has some serious competition Dom Reseigh-Lincoln • 2020-11-06T15:33:00Z Word algorithm was derived from the name Al-Khwarizmi, Persian mathematician 9. But nowadays the word most often applies to the step-by-step procedure for solving a computer problem. The algorithm is like a recipe, with a discreet beginning and end and a prescribed sequence of steps that clearly lead to some desired result. But to come up with the right answer at the end of the program is only a minimum requirement. The best algorithms also run fast, are thrifty in their memory usage and other computer resources, and are easy to understand and modify. The best ones are always called elegant, although Al-Khwarizmi may not have used this term for his formulas for solving quadratic equations. As the mind learns to understand more complex combinations of ideas, simpler formulas will soon reduce their complexity. Antoine-Nicholas de Condorcet, 1794 Algorithm can be considered a connection between programming language and application. It's the way we call the Cobol compiler how to generate a payroll system, for example. Although algorithms can end up like thousands of lines of computer code, they often start as very high-level abstractions, the kind an analyst could pass on to a programmer. For example, a lengthy routine in this payroll system might have started with this algorithmic specification: Look for an employee's name in the employee table. If it's not there, print the Invalid Employee message. If all other data in the input record is valid, go to the routine that calculates the net pay from gross pay. Repeat these steps for each employee. Then go to the routine that prints checks. Routines gross to the network and to write checks should have their own algorithms. The word algorithm is named after the mathematician Al-Khwarizmi. Reality interferes Of course, it's not that simple. If that were the case, the study of algorithms would not become the main sector of computer science and the subject of countless books and doctoral problems. But it's not hard to imagine computer engineers in the 1950s thinking they've largely finished the job. They invented electronic computers with stored programs and languages like Fortran and Cobol to run on them, and largely banished the agony of programming assembly languages. In fact, software pioneers like Grace Hopper saw compilers, and the algorithms that instructed them, as such progress – they could understand English – that they named the first computer to use one universal automatic computer, or Univac. With adjectives as universal and automatic in its name, the computer could almost expect the program itself. The Xerox researcher has a problem that he wants to discuss with a colleague, so he steps across the hallway to his office. two of them brainstorming on the board, a third colleague notices their activities and decides to drop in after a few minutes leaves the meeting and then has an idea that he thinks might help. He writes it down on his label and leaves it on one of their tables. Interactions like this happen all day every day in workplaces around the world. What makes these particular interactions different is that the three collaborators are thousands of miles apart. They work in virtual offices, walk around virtual halls, write on a virtual board. The note? You've agreed: virtual. These Xerox researchers work in Jupiter, the most exotic and advanced of the collection of community systems in development at the Palo Alto Research Center (PARC). Jupiter doesn't confuse traditional computing. These are not e-mail, relay databases, or other information systems that help people organize and access facts. Jupiter is a social system - a network site designed to allow colleagues, regardless of physical location, to share and create ideas. Jupiter is virtual social reality, says John Seely Brown, PARC director and chief scientist at Xerox. It's a system to support the organizational mind. Jupiter is the work of a handful of PARC researchers led by Paul Curtis, a 35-year-old computer scientist. He has long hair and a hair and works from a crowded, cubbyhole-like office - exactly what you'd expect in PARC. In fact Curtis is something of an iconic figure in computer circles, a hacker hacker best-known for his pioneering work on MUDs (Multi-User Dungeons) and MOOs (MUDs, Object-Oriented), two of the Internet's most new and dynamic technologies. MUDs were created in the late 1970s to promote interactive adventure games. Participants built their own electronic worlds, adopted new identities, searched for treasure, or fought wars. As MUDs got more sophisticated, players used them to write software to make their games more exciting. MUDs has become a programming tool. MOOs are a subset of MUDs. They use object-oriented programming to make writing code and environments more robust. Curtis himself is best known as the creator of LambdaMOO, which he revealed in January 1991. LambdaMOO is a virtual world domed mostly by university students. Participants play games, discuss homework, and communicate in the way students communicate everywhere. LambdaMoo is an evolving community, although built on hundreds of thousands of lines of computer code, most of them written by its members. MoOs are very compelling, says Curtis, whose LambdaMOO identity is Archwizard Haakon. They engage people very actively. He says it hasn't been such a big leap from college students discussing the homework of engineers exchanging ideas about new products. So born on Jupiter.Na computer screen in front of me are rows of windows

that conjure up memories of Hollywood Square or the opening credits of Brady Brady In these squares, however, ordinary people in ordinary offices occupy what people do: sit at their desks, talk on the phone, knock on computer keyboards. They are Xerox researchers and engineers in the midst of their daily activities. They are people who work in Jupiter.What most distinguishes Jupiter from traditional computer systems is its grounding in the physical world. Different rooms of Jupiter offer clues about what kinds of behaviors are appropriate there. Personal discussions in a private office are more informal than, for example, group discussions in one of Jupiter's virtual laboratories. And people don't have access to colleagues according to the wanted. Each square video has an icon that indicates how interruptible the person wants to be. An open door means colleagues should feel free to tap and enter. A locked door is an electronic sign not to disturb. People want boundaries, says John Seely Brown. They want to know what's expected of them. So different social protocols connect with different places. This gives you the feeling that they are 'located' and willing to communicate in a natural way. Just as important as these social protocols are the tools Jupiter involves to enable productive collaboration and focused conversation. Jupiter virtual whiteboards, fax machines, tape recorders, and messaging systems provide all the functions of physical tools – but without their limitations. I watched Jupiter from the outside - now it's time to step in and become a player. I'm late to meet someone on the other side of the building. I'm going to click on his square and find out he's on the phone. So I wrote him a note so he'd know I was on my way. I'm going to drag a message through his window and click. Words, You pass a note mike appears on the screen - narration generated by the system omniscient Greek choir, event-driven programs that provide running commentary on the action. Mike, still on the phone, gives waves and gestures for me to come on. Fewer than 60 people now use Jupiter, mainly researchers at PARC and its sister laboratory in Grenoble, France, as well as Xerox engineers in Rochester, New York. But for this core group, the system has become an essential part of their daily work experience. A team of engineers reports that Jupiter played a significant role in how it prototyped a new product, internet billing and credit-authorization system. Most are used for common activities such as tracking hard-to-reach colleagues. And people are looking forward to brainstorming the serendipity Jupiter allows, as well as bumping into a friend's break in the lounge – a friend who happens to be on the other side of the earth. Jupiter is still an experiment, not quite ready for prime time. But his technical headaches are getting less painful every day. Meanwhile, demand to be part of Jupiter continues to grow. We never tried to get users, curtis says. Instead, we had 'success problem - people keep coming to us and saying they really want to use it. So Curtis and his colleagues are working on deployment strategies. This fall, PARC plans to release a version of Jupiter designed to operate on personal computers – opening up a much larger population inside Xerox. Curtis is looking forward to it: That's when we'll know what these systems are really good for. Debra Feinstein (debra@loop.com) writes about technology and innovation from Topanga Canyon, California. California.