Міністерство освіти і науки, молоді та спорту

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РЕФЕРАТ

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# Introduction

A computer is an electronic device that executes certain actions through user-based commands. It is made up of two parts - hardware and software. The computer processes input through input devices like the mouse and keyboard. The computer displays output through output devices like a monitor and printer. The size of a computer varies considerably from small personal computers (like laptops, minicomputers, and notebook laptops), to gigantic supercomputers which require an entire building to host them. The speed also has a very large range. Computers have become indispensable in today's world.

A Word Processing software automatically corrects spelling and grammatical mistakes. If content needs to be replicated, there are options known as 'copy' and 'paste' that allow you to do this without re-typing the content. You can print documents and make several copies too. It is easier to read a word-processed document than a handwritten one, making it effectual for paperwork. You can add images to your document as well, provided by certain features on word processors.

It is a network that connects computers worldwide, to an information source that is free to all, at a minimal fee per month from one's service provider. You can browse through much more information than you could do in a library. That is because computers can store enormous amounts of information. You also have very fast and convenient access to information. Through 'email', you can communicate with a person sitting thousands of miles away, within a few seconds. Chat software applications enable one to speak to another person in real time. Video conferencing tools are becoming readily available to the common man, making it a convenient feature for one-on-one meetings.

Audio or video composition and editing have been made much easier by computers. It no longer costs thousands of dollars in equipment, to compose music or make a film. Graphic engineers can use computers to generate short or full-length films or even create 3D models. Anybody owning a computer can now enter the field of media production. Special effects in science fiction and action movies are created using computers. Designers of all kinds from the media industry, are finding innovative ways of putting the internet to use.

With desktop publishing, you can create page layouts for entire books on your personal computer. Aspiring writers and the like, can take advantage of this very resourceful feature.

You can diagnose diseases. You can learn about studies related to them. Certain software can be used in 'magnetic resonance imaging', to examine the internal organs of the human body. Software is used for performing surgery too. Computers are used to store valuable patient data, and other information that doctors need private access to.

Thanks to computers, which have computing speeds of over a million calculations per second, we can perform the biggest of mathematical calculations, without having to worry if the result is incorrect, since computers are designed to produce accurate results.

All financial transactions are done by a computer software. It provides security, speed, and convenience. Valuable customer information is stored, and can be retrieved whenever an employee at the bank wishes to access or verify certain facts.

Software is widely used here to help keep lines of communication constantly buzzing. Also, all mobile phones have software embedded in them, making it easier to handle certain tasks, as well as multitask, when it comes to everyday chores and responsibilities. Even online games are accessible, where two players from different parts of the world, can compete and interact merely through the power of the internet.

Instead of studying from textbooks, computers make it easier to learn from an E-learning software. These are available electronically online, and are accessible either freely or through a course that one pays for - much like what is taught in any college/university.

Shops and supermarkets use computer software that calculates a customer's bills, as well as keeps track of how much is made monthly. Taxes can be calculated and paid online too. Accounting is done using computers, where large amounts of data are fed into a system. One can predict future trends of a business using artificial intelligence software. Software is used in major stock markets to keep track of the fall and rise of stock rises. One can even trade stocks online. There are fully automated factories running on software, to help keep track of the business without missing out on important updates.

Computers have leapfrogged the human race into another league. It is used in each and every aspect of human life. They have spearhead the human quest of eradicating social problems like illiteracy and poverty. It is difficult to imagine a world bereft of computers. This revolutionary technology is indeed a boon to us all.

# 1. Computer uses in business

The widespread use of computers has successfully provided a certain ease, speed, and accuracy to the way in which modern businesses are run. From simple calculations to recording and analyzing complex data, computers have become integral to the survival of any business in present times.

The Information Technology (IT) revolution that brought in computers has gone through a variety of stages. The prominent introduction being in the 1960s, when big companies had to store large amounts of data. The revolution of computers initially was used for complex data bases only. However, people realized the many uses that computers had to offer to everyone for daily use. Two major breakthroughs were the introduction of PCs and Mac computers, which of course greatly facilitated businesses and working people in several ways. Apart from that, hardware such as scanners, CDs, floppy drives, and printers, have facilitated the operations of offices in a big way.

Earlier, before computers were introduced in businesses, there were multiple devices in offices such as fax machines, typewriters, telefax equipment, stenography equipment, and filing cabinets that were used extensively. Computers successfully replaced all these office tools. The entire office became 'dematerialized', which also resulted in the optimum use of the available space.

A computer is a clever accountant. There are countless accounting software that can cleverly record entries and plan finances. These financial software basically increase the accuracy and efficiency of the accounting process. There are also several Internet banking facilities that have come into use in recent times. Such facilities enable people to conduct transactions from their offices, saving them a journey to the bank.

The Internet and the concept of emails has benefited businesses immensely, as information, letters, graphics, applications, and almost any sort of communication can be transmitted from person to person, at distant locations, in a matter of seconds. The Internet also helps in communication to the masses. Stock investors, Forex traders, media companies, financial planners, and company owners rely heavily on electronic communication for instant transfer of information.

In today's world, it is easy to prepare documents and create presentations. Decades ago, these would take weeks, if not days, to be completed. Due to everything being computerized, important documents and presentations can be completed in a matter of hours, acting as a catalyst for various business processes.

# 2. Computer uses in finance

The discovery of computers has transformed the financial industry and how business deals are transacted. It is possible for accountants to keep large amounts of data, conduct intricate calculations and manage financial transactions from a computer. Computer technology enables global economies capabilities impossible decades ago. Computers influence both business and personal financial management.

Spreadsheet software influences the way large- and medium-sized firms, as well as individuals, key in and organize financial data. Spreadsheet applications are used to run day-to-day financial tasks, such as compiling financial data, presenting the data in an organized manner through the use of charts and graphs, drawing budgets and calculations of complex transactions. This application comes with computer programs, such as Microsoft excel, that enables organizations and individuals to plan finances without wasting too much time.

Computerization makes data storage manageable and less bulky. Computers enable organizations to store large amounts of files in a small space, allowing us to have a large track of historical transactions, while avoiding consumption of space that would otherwise be consumed by piles of files in cabinets. Keeping financial records is critical for organizations, as well as individuals, as it allows tracking of payment records, debts owed, purchases done and bank transactions made. Having detailed financial records helps an organization to continually audit and analyze business performance.

Computerized financial software conducts programmed business and accounting transactions. Most finance departments utilize accounting applications, such as QuickBooks, to perform financial transactions and to manage a company’s income and expenditure. These programmed applications enable an organization or individuals to keep track of financial operations and also conduct complex transactions effortlessly without consuming a lot of time and labor that would otherwise be used in case of manual transactions. Organizations can purchase software depending on nature of work; other applications include Grant Management application, and payroll software.

Computers have enhanced access to wide financial information through Internet access. Business operators or individuals can now access information on investment prospects, and conduct a detailed research on its profitability. There is also wide financial information available on the Internet, such as world prices, tax changes, inflation rate and currency exchange rates making it easier for institutions and individuals to make informed financial decisions. The Internet provides a wide source of information and access to specific financial reports of companies in trade.

# 3. Computer uses in entertainment

Computers started as very simplistic machines for storing and transferring data. Most of these files were text-based reports used in a work environment. As technology advanced, computers became increasingly versatile in what they could do. With the creation of the Internet and faster processors, file sharing and entertainment became a popular use for personal computers everywhere. Computers have endless uses in the entertainment industry by directly marketing products to users

Computers now have almost unlimited access to any song by any artist. Many website services allow users to purchase individual tracks or albums directly to their computer. Most record labels take advantage of these services to make up for lost revenue from illegal downloading. Although, if users do not wish to purchase music, they can still stream music from many websites free but with advertisements. With the advancement of video card and Internet speeds, movies and streaming television are now at the click of a mouse button. Many website services offer free-to-stream movies with the cost of a monthly subscription fee. Some websites even offer free streaming episodes of certain TV series with Internet commercials. With the use of newer HD televisions and computers, the option of sending your computers video feed to a full-screen television is possible. In some cases, users may not even need to pay for cable service or television because of all the free available video content online.

Art is something that is readily available online at any moment. Pictures, paintings, poetry and more are just a click away. Popular browsers offer specific image search options to quickly browse through art with a single keyword. Besides general use, computer photo editing programs and animation programs are also the sources behind most movies and professional photographs.

Computer games are a quickly growing market just like all other forms of video games. However, computer games offer a very wide array of possibilities. Computers have access to many peripheral devices such as keyboards, mouses, joysticks, controllers and more.

# 4. Computer uses in scientific research

Computers play a major role today in every field of scientific research from genetic engineering to astrophysics research. This article is a brief overview of the role that computers have played in research and the ways in which they are helping unravel several scientific mysteries.

Since then, computer technology has advanced by leaps and bounds to bring extreme computing power into the hands of the common man. Today computers are ubiquitous, with applications in every field of human endeavor. To no field have computers contributed as much as scientific research. From predicting weather to running astrophysical simulations, computers are the scientist's prime analytical tool in unraveling the mysteries of nature.

It is truly impossible to capture the whole range of computer applications in scientific research. Here is a bird's-eye view of the role of computers in scientific research, where I shall discuss four of their most important applications.

Experimentation is the cornerstone of scientific research. Every experiment in any of the natural sciences generates a lot of data, that needs to be stored and analyzed to derive important conclusions, to validate or disprove hypotheses. Computers attached with experimental apparatuses, directly record data as it's generated and subject it to analysis through specially designed software.

Analyzing tons of statistical data is made possible using specially designed algorithms that are implemented by computers. This makes the extremely time-consuming job of data analysis to be a matter of a few minutes. In genetic engineering, computers have made the sequencing of the entire human genome possible. Data from different sources can be stored and accessed via computer networks set up in research labs, which makes collaboration simpler.

One of the prime uses of computers in pure science and engineering projects is the running of simulations. A simulation is a mathematical modeling of a problem and a virtual study of its possible solutions. Problems which do not yield themselves to experimentation can be studied through simulations carried out on computers.

For example, astrophysicists carry out structure formation simulations, which are aimed at studying how large-scale structures like galaxies are formed. Space missions to the Moon, satellite launches and interplanetary missions are first simulated on computers to determine the best path that can be taken by the launch vehicle and spacecraft to reach its destination safely.

Most advanced scientific instruments come with their own on-board computer, which can be programmed to execute various functions. For example, the Hubble Space Craft has its own on-board computer system which is remotely programmed to probe the deep space. Instrumentation control is one of the most important applications of computers.

Lastly, in the form of Internet, computers have provided an entirely new way to share knowledge. Today, any one can access the latest research papers that are made available for free on websites like Arxiv. Sharing of knowledge and collaboration through the Internet, has made international cooperation on scientific projects possible.

Through various kinds of analytical software programs, computers are contributing to scientific research in every discipline, ranging from biology to astrophysics, discovering new patterns and providing novel insights. When the work in neural network based artificial intelligence advances and computers are granted with the ability to learn and think for themselves, future advances in technology and research will be even more rapid. If we survive human strife and manage not to self destruct our civilization, future is going to be an exciting time!

# 5. Computer uses in education

Computers have become an inseparable part of our lives to a great extent. Particularly in the field of education, their uses are manifold. Let us understand them further.

Over the years, computers have changed the way the world works. They have proved to be an asset not only for the corporate sector, but also in other sectors such as medicine, architecture, communication, research, sports and education. Speaking of which, computers have taken over the field of education, bringing over its influence in every possible manner. These very machines, which were once used only in research laboratories and government offices have now become a common sight in schools across the world. Today, computers have touched the lives of several students living in the remotest part of our planet, be it directly or otherwise.

There is no denying the fact that computers completely rule the life of an average student in any corner of the world, be it in the form of hand-held devices, or printed textbooks (thanks to the use of computers in printing). What follows are some instances of the utility of computers in education.

Without computers, learning would be restricted within the walls of institutions, and nothing could possibly be more unfair. Knowledge and education is empowering, and the best way to make is accessible to everyone is through computers. Working professionals, stay-at-home parents, senior citizens, even curious minds benefit from online education. e-Learning is accessible and affordable, not to mention extremely doable, be it a professional looking to hone his management skills or a college student wanting to learn a foreign language.

Computers are shrinking our world, and from what we're seeing, it appears to be a mixed bag. While social networking is a boon for those who wish to use it to expand their academic horizons, it does come with implications. But, focusing on the positives of networking - it bonds people around the world, helping students reach out to scholars and vice versa, making connectivity worthwhile.

With all the creative software at hand, it has become easy for students to jazz up their assignments and projects; basically, assignments have become activities that students look forward to, from their earlier mundane form. From a higher perspective, the usage of computers in aiding learning is prominent in almost every field, from botanical sciences to fine arts.

The internet is now what once used to be the library. What's more, it is easier to access, along with being a convenient and fairly reliable source of information. With bulky computers now being popularly reduced to hand-held devices, students literally have information at their fingertips. Again, free knowledge that is easily available does have its pitfalls, but looking at the larger picture, it is definitely more beneficial.

# 7. Summary

In conclusion, let’s summarize all highlights. Computers have become an essential part of modern human life. Since the invention of computer they have evolved in terms of increased computing power and decreased size. Owing to the widespread use of computers in every sphere, Life in today’s world would be unimaginable without computers. They have made human lives better and happier. There are many computer uses in different fields of work. Engineers, architects, jewelers, and filmmakers all use computers to design things. Teachers, writers, and most office workers use computers for research, word processing and emailing. Small businesses can use computers as a point of sale and for general record keeping.

Computers have its dominant use in the education field which can significantly enhance performance in learning. Even distance learning is made productive and effective through internet and video-based classes. Researchers have massive usage of these computers in their work from the starting to till the end of their scholarly work.

Most of the medical information can now be digitized from the prescription to reports. Computation in the field of medicine allows us to offer varied miraculous therapies to the patients. ECG’s, radiotherapy wasn’t possible without computers.

We know well that computers are being used by the financial institutions like banks for different purposes. The foremost important thing is to store information about different account holders in a database to be available at any time. Keeping the records of the cash flow, giving the information regarding your account,

We can use computers for playing games, watching movies, listening to music, drawing pictures.

Every single information shared can be recorded by using computer. Official deals and the issues were made even through online. We use email system to exchange the information. It has wide uses in marketing, stock exchanges and bank. Even the departmental stores can’t run effectively without computer.

Electronic mail is the revolutionary service offered by the computes. Video Conferencing is also another major advantage. Electronic shopping through online shopping added favor to purchaser and merchants. Electronic banking is now at your hand where every bank has online support for transaction of monetary issues. You can easily transfer your money anywhere even from your home.

# 8. Summary translation

На останок, давайте підсумувати всі моменти. Комп'ютери стали невід'ємною частиною сучасного людського життя. З моменту винаходу комп'ютера вони розвивалися в плані підвищення обчислювальної потужності і зниження розміру. У зв'язку з широким використанням комп'ютерів у кожній сфері, життя в сучасному світі буде неможливо уявити без комп'ютерів. Вони зробили життя людей краще і щасливіше. Є багато способів застосувати комп’ютери в різних областях сферах людської діяльності. Інженери, архітектори, ювеліри, і режисери, всі використовують комп'ютери для роботи . Вчителі, письменники, і більшість офісних працівників використовують комп'ютери для наукових досліджень, обробки текстів і по електронній пошті. Малі підприємства можуть використовувати комп'ютери в якості точки продажу і для загального діловодства.

Комп'ютери мають своє домінуюче використання у сфері освіти, які можуть значно підвищити продуктивність в навчанні. Навіть дистанційне навчання стає продуктивним і ефективним через інтернет і відео. Дослідники масово використовують комп’ютерні системи на кожному етапі їх наукової роботи.

Велика частина медичної інформації в даний час можуть бути оцифрована з приписом до звітів. Обчислення в області медицини дозволяє нам пропонувати різноманітні чудові терапії для пацієнтів. В ЕКГ, променевій терапії неможливо обійтись без використання комп'ютерів.

Ми добре знаємо, що комп'ютери використовуються фінансовими установами, такими як банки для різних цілей. Найбільшим чином, щоб зберігати інформацію про різних власників рахунків в базі даних, яка повинна бути доступна в будь-який час. Ведення записів грошового потоку, що дає інформацію про вашому рахунку.

Ми можемо використовувати комп'ютери для ігор, перегляду фільмів, прослуховування музики, малювання.

Кожен обмін інформацією може бути записаний за допомогою комп'ютера. Офіційні пропозиції і питання можуть вирішуватись ще через онлайн. Ми використовуємо систему електронної пошти для обміну інформацією. Вона має широкі застосування в маркетингу, на біржі та у банках. Навіть магазини не можуть працювати ефективно без комп'ютера.

Електронна пошта революційна послуга, яку забезпечують комп’ютери. Відеоконференції також є ще однією важливою перевагою. Електронна покупка товарів онлайн додає . Електронний банкінг тепер у вас під рукою, де кожен банк має онлайн-підтримку угоди грошових питань. Ви можете легко перевести Ваші гроші в будь-якій точці, навіть від вашого будинку.