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DSA to Development: A Complete GuideBeginner to AdvanceJAVA Backend Development - LiveIntermediate and AdvanceTech Interview 101 - From DSA to System Design for Working ProfessionalsBeginner to AdvanceFull Stack Development with React & Node JS - LiveBeginner to AdvanceJava Programming Online Course [Complete Beginner to Advanced]Beginner to AdvanceC++ Programming Course Online - Complete Beginner to AdvancedBeginner to AdvancePage 2Our website uses cookiesWe use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our Cookie Policy & Privacy Policy A security mechanism is a method or technology that protects data and systems from unauthorized access, attacks, and other threats. Security measures provide data integrity, confidentiality, and availability, thereby protecting sensitive information and maintaining trust in digital transactions. In this article, we will see types of security mechanisms.What is Network Security?Network Security is a field in computer technology that deals with ensuring the security of computer network infrastructure. The network is very necessary for sharing information whether it is at the hardware level such as printer, scanner, or at the software level. Therefore security mechanisms can also be termed as is set of processes that deal with recovery from security attacks. Various mechanisms are designed to recover from these specific attacks at various protocol layers. Encipherment : This security mechanism deals with hiding and covering of data which helps data to become confidential. It is achieved by applying mathematical calculations or algorithms which reconstruct information into not readable form. It is achieved by two famous techniques named Cryptography and Encipherment. Level of data encryption is dependent on the algorithm used for encipherment. Access Control : This mechanism is used to stop unattended access to data which you are sending. It can be achieved by various techniques such as applying passwords, using firewall, or just by adding PIN to data. Notarization : This security mechanism involves use of trusted third party in communication. It acts as mediator between sender and receiver so that if any chance of conflict is reduced. This mediator keeps record of requests made by sender to receiver for later denied. Data Integrity : This security mechanism is used by appending value to data to which is created by data itself. It is similar to sending packet of information known to both sending and receiving parties and checked before and after data is received. When this packet or data which is appended is checked and is the same while sending and receiving data integrity is maintained. Authentication Exchange : This security mechanism deals with identity to be known in communication. This is achieved at the TCP/IP layer where two-way handshaking mechanism is used to ensure data is sent or not Bit Stuffing : This security mechanism is used to add some extra bits into data which is being transmitted. It helps data to be checked at the receiving end and is achieved by Even parity or Odd Parity. Digital Signature : This security mechanism is achieved by adding digital data that is not visible to eyes. It is form of electronic signature which is added by sender which is checked by receiver electronically. This mechanism is used to preserve data which is not more confidential but sender's identity is to be notified. ConclusionSecurity methods are critical for protecting data and network infrastructure from unauthorized access, attacks, and other threats. They protect data integrity, secrecy, and availability, hence preserving trust in digital transactions. Organizations can protect sensitive information and maintain secure network communication by using techniques such as encipherment, access control, notarization, and digital signatures. Share copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms. Attribution You must give appropriate credit , provide a link to the license, and indicate if changes were made . You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. ShareAlike If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. No additional restrictions You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation . No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. A security mechanism is a process or device that is designed to protect data, systems, and networks from unauthorized access, attacks, or damage. It is a crucial component of cybersecurity that helps to ensure the confidentiality, integrity, and availability of information. Security mechanisms are used to prevent unauthorized users from accessing sensitive information, detect and respond to security incidents, and protect against various types of cyber threats.II. How do Security Mechanisms work?Security mechanisms work by implementing various security controls and measures to protect information and systems. These controls can include encryption, access control, authentication, intrusion detection, firewalls, and antivirus software. By using a combination of these controls, security mechanisms help to create layers of defense that make it more difficult for attackers to compromise systems and data.Security mechanisms also rely on security policies and procedures to define how security controls should be implemented and enforced. These policies help to ensure that security mechanisms are used effectively and consistently across an organization.III. What are the types of Security Mechanisms?There are several types of security mechanisms that are commonly used to protect information and systems. Some of the most common types include:1. Encryption: Encryption is a process that converts data into a secure format that can only be read by authorized users with the correct decryption key.2. Access control: Access control mechanisms are used to restrict access to systems and data based on user permissions and privileges.3. Authentication: Authentication mechanisms verify the identity of users before allowing them to access systems or data.4. Intrusion detection: Intrusion detection mechanisms monitor network traffic and system activity for signs of unauthorized access or malicious activity.5. Firewalls: Firewalls are used to monitor and control incoming and outgoing network traffic to prevent unauthorized access and protect against cyber threats.6. Antivirus software: Antivirus software is used to detect and remove malware and other malicious software from systems.IV. How are Security Mechanisms implemented in computer systems?Security mechanisms are implemented in computer systems through a combination of hardware, software, and procedural controls. Hardware controls, such as firewalls and encryption devices, are used to protect systems and networks from external threats. Software controls, such as antivirus software and access control systems, are used to protect data and applications from internal threats. Procedural controls, such as security policies and training programs, are used to ensure that security mechanisms are used effectively and consistently.Security mechanisms are typically implemented at multiple layers of a computer system, including the network, operating system, and application layers. By using a defense-in-depth approach, organizations can create a strong security posture that helps to protect against a wide range of cyber threats.V. What are the benefits of using Security Mechanisms?Using security mechanisms offers several benefits to organizations, including:1. Protection of sensitive information: Security mechanisms help to protect sensitive data from unauthorized access, theft, or manipulation.2. Prevention of cyber attacks: Security mechanisms help to prevent cyber attacks, such as malware infections, data breaches, and denial-of-service attacks.3. Compliance with regulations: Security mechanisms help organizations to comply with data protection regulations and industry standards by implementing appropriate security controls.4. Increased trust and credibility: By implementing strong security mechanisms, organizations can build trust with customers, partners, and stakeholders and enhance their credibility in the marketplace.VI. What are some common examples of Security Mechanisms?Some common examples of security mechanisms include:1. Secure Sockets Layer (SSL) encryption: SSL encryption is used to secure data transmitted over the internet, such as online transactions and sensitive communications.2. Two-factor authentication: Two-factor authentication requires users to provide two forms of identification, such as a password and a one-time code sent to their mobile device, to access systems or data.3. Intrusion detection systems (IDS): IDS monitor network traffic for signs of suspicious activity and alert administrators to potential security threats.4. Biometric authentication: Biometric authentication uses unique physical characteristics, such as fingerprints or facial recognition, to verify the identity of users.5. Virtual private networks (VPNs): VPNs create a secure, encrypted connection between remote users and corporate networks to protect data transmitted over public networks.Overall, security mechanisms play a critical role in protecting information and systems from cyber threats and ensuring the security and privacy of data in todays digital world. By implementing strong security mechanisms and following best practices, organizations can reduce the risk of security incidents and safeguard their valuable assets. ,the free encyclopedia that anyone can edit.117,937 active editors 7,001,591 articles in EnglishThe English-language Wikipedia thanks its contributors for creating more than seven million articles! Learn how you can take part in the encyclopedia's continued improvement.Members of the victorious Blondie crewThe Boat Race 2018 took place on 24March. Held annually, The Boat Race is a side-by-side rowing race between crews from the universities of Oxford and Cambridge along a 4.2-mile (6.8km) tidal stretch of the River Thames in south-west London, England. For the third time in the history of the event, the men's, the women's and both reserves' races were all held on the Tideway on the same day. The women's race saw Cambridge lead from the start, eventually winning by a considerable margin to take the overall record to 4330 in their favour. In the women's reserve race, Cambridge's Blondie (crew pictured) defeated Oxford's Osiris by nine lengths. The men's reserve race was won by Cambridge's Goldie, who defeated Oxford's Isis by a margin of four lengths. The men's race was the final event of the day and completed a whitewash as Cambridge won, taking the overall record to 8380 in their favour. The races were watched by around 250,000 spectators live, and broadcast around the world. (Fullarticle...)Recently featured: Radar, Gun Laying, Mk.I and Mk.IIAndrea NavageroNosy KombaArchiveBy emailMore featured articlesAboutKitty Marion... that Kitty Marion (pictured) was force-fed over 200 times during a hunger strike?... that the North Korean destroyer Choe Hyon is the largest ship constructed for the Korean People's Navy?... that after the release of High and Low, director Akira Kurosawa received telephone calls imitating his film that threatened to kidnap his daughter?... that May Bradford Shockley is why Silicon Valley is where it is?... that the conservation of a goat might endanger the survival of Aquilegia paui?... that Joy Laking predicted in a school writing assignment that within ten years she would be making a living as an artist?... that the Taiwanese restaurant chain Formosa Chang drew inspiration from McDonald's for its non-greasy atmosphere and corporate practices?... that Haridas Mitra had his death sentence commuted after the intervention of Mahatma Gandhi?... that "Steve's Lava Chicken" recently became the shortest song to enter the UK Top 40?ArchiveStart a new articleNominate an articleNgg wa Thiong'oKenyan writer and activist Ngg wa Thiong'o (pictured) dies at the age of 87.In sumo, nosato Daiki is promoted to yokozuna.In association football, Liverpool win the Premier League title.In motor racing, lex Palou wins the Indianapolis 500.In basketball, the EuroLeague concludes with Fenerbahe winning the Final Four Playoff.Ongoing: Gaza warM23 campaignRussian invasion of UkrainetimelineSudanese civil wartimelineRecent deaths: Harrison Ruffin TylerPhil RobertsonMary K. GaillardPeter DavidAlan YentobGerry ConnollyNominate an articleMay 31: Dragon Boat Festival in China and Taiwan (2025); World No Tobacco DayBessarion455 Petronius Maximus, the ruler of the Western Roman Empire, was stoned to death by a mob as he fled Rome ahead of the arrival of a Vandal force that sacked the city.1223 Mongol invasion of Kievan Rus': Mongol forces defeated a Kievan Rus' army at the Battle of the Kalka River in present-day Ukraine.1468 Cardinal Bessarion (pictured) announced his donation of 746 Greek and Latin codices to the Republic of Venice, forming the Biblioteca Marciana.1935 A magnitude-7.7 earthquake struck Balochistan in British India, now part of Pakistan, killing between 30,000 and 60,000 people.2013 A tornado struck Central Oklahoma, killing eight people and injuring more than 150 others.Albertino Mussato (d.1329)Joseph Grimaldi (d.1837)Dina Boluarte (b.1962)Mbaye Diagne (d.1994)More anniversaries: May 30May 31June 1ArchiveBy emailList of days of the yearAboutCucumis metuliferus, the African horned cucumber, is an annual vine in the cucumber and melon family, Cucurbitaceae. Its fruit has horn-like spines, hence the name "horned melon". The ripe fruit has orange skin and lime-green, jelly-like flesh. It is native to Southern Africa, where it is a traditional food. Along with the gemsbok cucumber and the citron melon, it is one of the few sources of water during the dry season in the Kalahari Desert. This photograph, which was focus-stacked from 25 separate images, shows two C.metuliferus fruits, one whole and the other in cross-section.Photograph credit: Ivar LeidusRecently featured: Ignace TonenAustralian white ibisHell Gate BridgeArchiveMore featured picturesCommunity portal The central hub for editors, with resources, links, tasks, and announcements.Village pump Forum for discussions about Wikipedia itself, including policies and technical issues.Site news Sources of news about Wikipedia and the broader Wikimedia movement.Teahouse Ask basic questions about using or editing Wikipedia.Help desk Ask questions about using or editing Wikipedia.Reference desk Ask research questions about encyclopedic topics.Content portals A unique way to navigate the encyclopedia.Wikipedia is written by volunteer editors and hosted by the Wikimedia Foundation, a non-profit organization that also hosts a range of other volunteer projects: CommonsFree media repository MediaWikiWiki software development Meta-WikiWikimedia project coordination WikibooksFree textbooks and manuals WikidataFree knowledge base WikinewsFree-content news WikiquoteCollection of quotations WikisourceFree-content library WikispeciesDirectory of species WikiversityFree learning tools WikivoyageFree travel guide WiktionaryDictionary and thesaurusThis Wikipedia is written in English. Many other Wikipedias are available; some of the largest are listed below. 1,000,000+ articles DeutschEspaolFranaisItalianoNederlandsPolskiPortugusSvenskaTing Vit 250,000+ articles Bahasa IndonesiaBahasa MelayuBn-lm-gCataletinaDanskEestiEsperantoEuskaraMagyarNorsk bokmlRomnSimple EnglishSloveninaSrpskiSrpskohrvatskiSuomiTrkeOzbekcha 50,000+ articles AsturianuAzrbaycancaBosanskiFryskGaeilgeGalegoHrvatskiKurdLatvieuLietuviNorsk nynorskShqipSlovenina Retrieved from " 2This article is about the year 455. For other uses, see 455 (disambiguation).This article needs additional citations for verification. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed.Find sources:"455"news newspapers books scholar JSTOR (April 2019) (Learn how and when to remove this message)Calendar yearYearsMillennium1stmillenniumCenturies4thcentury5thcentury 6thcenturyDecades430s440s450s 460s470sYears452453454455 456457458vte455 by topicLeadersPolitical entitiesState leadersReligious leadersCategoriesBirthsDeathsDisestablishmentsvte455 in various calendarsGregorian calendar455CDLVAb urbe condita1208Assyrian calendar5205Balinese saka calendar376377Bengali calendar139 138Berber calendar1405Buddhist calendar999Burmese calendar183Byzantine calendar59635964Chinese calendar (WoodHorse)3152 or 2945to (WoodGoat)3153 or 2946Coptic calendar171172Discordian calendar1621Ethiopian calendar447448Hebrew calendar42154216Hindu calendars- Vikram Samvat511512- Shaka Samvat376377- Kali Yuga35553556Holocene calendar10455Iranian calendar167 BP 166 BPIslamic calendar172 BH 171 BHJavanese calendar340341Julian calendar455CDLVKorean calendar2788Minguo calendar1457 before ROC1457Nanakshahi calendar1013Seleucid era766/767 AGThai solar calendar997998Tibetan calendar(male Wood-Horse)581 or 200 or 572to(female Wood-Goat)582 or 201 or 571King Genseric sacks Rome (455)Year 455 (CDLV) was a common year starting on Saturday of the Julian calendar. At the time, it was known as the Year of the Consulship of Valentinianus and Anthemius (or, less frequently, year 1208 Ab urbe condita). The denomination 455 for this year has been used since the early medieval period, when the Anno Domini calendar era became the prevalent method in Europe for naming years.March 16 Emperor Valentinian III, age 35, is assassinated by two Hunnic retainers of the late Flavius Aetius, while training with the bow on the Campus Martius (Rome), ending the Theodosian dynasty. His primicerius sacri cubiculi, Heraclius, is also murdered.March 17 Petronius Maximus, former domesticus ("elite bodyguard") of Aetius, becomes (with support of the Roman Senate) emperor of the Western Roman Empire. He secures the throne by bribing officials of the imperial palace. Maximus consolidates his power by a forced marriage with Licinia Eudoxia, widow of Valentinian III.Maximus appoints Avitus, most trusted general, to the rank of magister militum and sends him on an embassy to Toulouse, to gain the support of the Visigoths. He elevates his son Palladius to Caesar and has him marry Eudocia, eldest daughter of Valentinian III.May 31 Maximus is stoned to death by an angry mob while fleeing Rome. A widespread panic occurs when many citizens hear the news that the Vandals are plundering the Italian mainland.June 2 Sack of Rome: King Genseric leads the Vandals into Rome, after he has promised Pope Leo I not to burn and plunder the city. Genseric sacks the city for a period of two weeks. Eudoxia and her daughters, Eudocia and Placidia, are taken hostage. The loot is sent to the harbour of Ostia and loaded into ships, from whence the Vandals depart and return to Carthage.July 9 Avitus is proclaimed Roman emperor at Toulouse, and later recognised by the Gallic chiefs in Viernum (near Arles).September 21 Avitus enters Rome with a Gallic army. He restores the imperial authority in Noricum (modern Austria) and leaves a Gothic force under Remistus, Visigoth general (magister militum), at Ravenna.The Ostrogoths conquer Pannonia and Dalmatia.Battle of Aylesford: Prince Vortimer rebels against the pro-Anglo-Saxon policies of his father, Vortigern. He is defeated in the battle at Aylesford (Kent). Hengist and his son Oisc become king of Kent. Horsa and Catigern, brother of Vortimer, are killed. The Britons withdraw to London (according to the Anglo-Saxon Chronicle).Skandagupta succeeds Kumaragupta I as ruler of the Gupta Empire (India). During his reign he crushes the Hun invasion; however, the expense of the wars drains the empire's resources and contributes to its decline.Gaero becomes king of the Korean kingdom of Baekje.[1]Earliest recorded date at Chichen Itza on the Yucatn Peninsula (Mexico) (approximate date).Barter economy replaces organized trade as Romans and other citizens desert their towns for the countryside, where they will be less vulnerable to barbarian raids (approximate date).The city of Vindobona (Vienna) is struck by an epidemic that spreads through the Roman provinces. The disease is probably streptococcus or a form of scarlet fever with streptococcus pneumoniae (approximate date).Rusticus, archbishop of Lyon (approximate date)Wang Baoming, empress of the Southern Qi (d. 512)March 16Valentinian III, emperor of the Western Roman Empire (b. 419)Heraclius, Roman courtier (primicerius sacri cubiculi)May 31 Petronius Maximus, emperor of the Western Roman EmpireBiyu of Baekje, king of Baekje[1]Catigern, prince and son of Vortigern (approximate date)Horsa, leader of the Anglo-Saxons (approximate date)Kumaragupta I, ruler of the Gupta Empire (India)Niall Noigiallach, High King of Ireland (approximate date)Palladius, son of Petronius Maximus (approximate date)Prosper of Aquitaine, disciple and Christian writer (approximate date)^ a b "List of Rulers of Korea". www.metmuseum.org. Retrieved April 20, 2019.Retrieved from " 3One hundred years, from 301 to 400Millennia1stmillenniumCenturies3rdcentury4thcentury5thcenturyTimelines3rdcentury4thcentury5thcenturyState leaders3rdcentury4thcentury5thcenturyDecades300s310s320s330s340s350s360s370s380s390sCategories:Births Deaths Establishments DisestablishmentsvteEastern Hemisphere at the beginning of the 4th century CE.Eastern Hemisphere at the end of the 4th century CE.The 4th century was the time period from 301 CE (represented by the Roman numerals CCCI) to 400 CE (CD) in accordance with the Julian calendar. In the West, the early part of the century was shaped by Constantine the Great, who became the first Roman emperor to adopt Christianity. Gaining sole reign of the empire, he is also noted for re-establishing a single imperial capital, choosing the site of ancient Byzantium in 330 (over the current capitals, which had effectively been changed by Diocletian's reforms to Milan in the West, and Nicomedeia in the East) to build the city soon called Nova Roma (New Rome); it was later renamed Constantinople in his honor.The last emperor to control both the eastern and western halves of the empire was Theodosius I. As the century progressed after his death, it became increasingly apparent that the empire had changed in many ways since the time of Augustus. The two-emperor system originally established by Diocletian in the previous century fell into regular practice, and the east continued to grow in importance as a centre of trade and imperial power, while Rome itself diminished greatly in importance due to its location far from potential trouble spots, like Central Europe and the East. Late in the century Christianity became the official state religion, and the empire's old pagan culture began to disappear.[citation needed] General prosperity was felt throughout this period, but recurring invasions by Germanic tribes plagued the empire from 376[1][2] CE onward. These early invasions marked the beginning of the end for the Western Roman Empire.In China, the Jin dynasty, which had united the nation prior in 280, began rapidly facing trouble by the start of the century due to political infighting, which led to the insurrections of the northern barbarian tribes (starting the Sixteen Kingdoms period), which quickly overwhelmed the empire, forcing the Jin court to retreat and entrench itself in the south past the Yangtze river, starting what is known as the Eastern Jin dynasty around 317. Towards the end of the century, Emperor of the Former Qin, Fu Jin, united the north under his banner, and planned to conquer the Jin dynasty in the south, so as to finally reunite the land, but was decisively defeated at the Battle of Fei River in 383, causing massive unrest and civil war in his empire, thereby leading to the fall of the Former Qin, and the continued existence of the Eastern Jin dynasty.According to archaeologists, sufficient archaeological evidence correlates of state-level societies coalesced in the 4th century to show the existence in Korea of the Three Kingdoms (300/400668 CE) of Baekje, Goguryeo, and Silla.Historians of the Roman Empire refer to the "Long Fourth Century" to the period spanning the fourth century proper but starting earlier with the accession of the Emperor Diocletian in 284 and ending later with the death of Honorius in 423 or of Theodosius II in 450.[3]See also: Christianity in the 4th centuryGregory the Illuminator mosaic, converted Armenia from Zoroastrianism to ChristianityContemporary bronze head of Constantine I (r. 306337 AD)Early 4th century Former audience hall now known as the Basilica, Trier, Germany, is built.Early 4th century The Gupta Empire is established.301: Armenia first to adopt Christianity as state religion.304439: The Sixteen Kingdoms in China begins.306337: Constantine the Great, ends persecution of Christians in the Roman Empire (see also Constantinian shift) and Constantinople becomes new seat of government (New Rome).Tikal had a population of about 100,000 when it was conquered by Teotihuacan, less than a fourth of its peak population[4]320: Butuan Boat One, the oldest known Balangay, a multi-purpose ship native to the Philippines is built.325328: The Kingdom of Aksum adopts Christianity.325: Constantine the Great calls the First Council of Nicaea to pacify Christianity in the grip of the Arian controversy.335380: Samudragupta expands the Gupta Empire.337: Constantine the Great is baptized a Christian on his death bed.350: About this time the Kingdom of Aksum conquers the Kingdom of Kush.350400: At some time during this period, the Huns began to attack the Sassanid Empire.[2]350: The Kutai Martadipura kingdom in eastern Borneo produced the earliest known stone inscriptions in Indonesia known as the Mulavarman inscription written in the Sanskrit language using Pallava scripture.[5]Mid-4th century Dish, from Mildenhall, England, is made. It is now kept at the British Museum, London.Mid-4th century Wang Xizhi makes a portion of a letter from the Feng Ju album. Six Dynasties period. It is now kept at National Palace Museum, Taipei, Taiwan, Republic of China.365: An earthquake with a magnitude of at least eight strikes the Eastern Mediterranean. The following tsunami causes widespread destruction in Crete, Greece, Libya, Egypt, Cyprus, and Sicily.376: Visigoths appear on the Danube and are allowed entry into the Roman Empire in their flight from the Huns.378: Battle of Adrianople: Roman army is defeated by the Visigoth cavalry. Emperor Valens is killed.378395: Theodosius I, Roman emperor, bans pagan worship, Christianity is made the official religion of the Empire.378: Siyaj K'ak' conquers Waka on (January 8), Tikal (January 16) and Uaxactun.Wall painting of the Council of Constantinople (381) in the Stavropoleos monastery, Romania381: First Council of Constantinople reaffirms the Christian doctrine of the Trinity by adding to the creed of Nicaea.383: Battle of Fei River in China.395: The Battle of Canhe Slope occurs.395: Roman emperor Theodosius I dies, causing the Roman Empire to split permanently.Late 4th century: Cubiculum of Leonis, Catacomb of Commodilla, near Rome, is made.Late 4th century: Atrium added in the Old St. Peter's Basilica, Rome.For a more comprehensive list, see Timeline of historic inventions 4th century.The Stirrup was invented in China, no later than 322.[6][1]Kama Sutra, dated between c.400 BC to c. 300 AD.[7][8]Iron pillar of Delhi, India is the world's first Iron Pillar.[citation needed]Trigonometric functions: The trigonometric functions sine and versine originated in Indian astronomy.[9]Codex Sinaiticus and the Codex Vaticanus Graecus 1209, are the earliest Christian bibles.[10][11]Book of Steps, Syriac religious discourses.[citation needed]^ a b "The invention and influences of stirrup". Archived from the original on December 3, 2008.^ a b Roberts, J: "History of the World". Penguin, 1994.^ The Long Fourth Century 284450: Continuity and Change in the Later Roman Empire ed. S. McGill, C. Sogno and E. Watts (Cambridge 2008).^ "The Maya: Glory and Ruin". National Geographic Magazine. Archived from the original on April 9, 2008.^ "The Austronesians: Historical and Comparative Perspectives". ANU Press. Archived from the original on 2013-12-25. Retrieved 2013-04-29.^ Lee, Adela C.Y. "The stirrup and its effect on chinese military history". Silkroad Foundation.^ Sengupta, J. (2006). Refractions of Desire, Feminist Perspectives in the Novels of Toni Morrison, Michle Roberts, and Anita Desai. Atlantic Publishers & Distributors. p.21. ISBN978-81-269-0629-1. Archived from the original on 4 May 2016. Retrieved 7 December 2014.^ Kakar, Sudhir; Doniger, Wendy (2003). Kamasutra. Oxford; Toronto: Oxford University Press. pp.xi. ISBN978-0-19-283982-4.^ Bag, A.K. (1979). 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Retrieved 16 March 2013.Retrieved from " 4The following pages link to 4th century External tools(link counttransclusion countsorted list) See help page for transcluding these entriesShowing 50 items.View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500)List of decades, centuries, and millennia (links | edit)Religion in pre-Islamic Arabia (links | edit)Rosetta Stone (links | edit)20th century (links | edit)15th century (links | edit)16th century (links | edit)17th century (links | edit)18th century (links | edit)14th century (links | edit)1st century (links | edit)13th century (links | edit)397 (links | edit)12th century (links | edit)11th century (links | edit)7th century (links | edit)10th century (links | edit)9th century (links | edit)8th century (links | edit)6th century (links | edit)5th century (links | edit)3rd century (links | edit)2nd century (links | edit)405 (links | edit)4th century BC (links | edit)432 (links | edit)200s (decade) (links | edit)300s (decade) (links | edit)1st century BC (links | edit)2nd century BC (links | edit)3rd century BC (links | edit)5th century BC (links | edit)6th century BC (links | edit)400s (decade) (links | edit)310s (links | edit)320s (links | edit)321 (links | edit)21st century BC (links | edit)11th century BC (links | edit)286 (links | edit)476 (links | edit)385 (links | edit)7th century BC (links | edit)410 (links | edit)325 (links | edit)380s (links | edit)381 (links | edit)470s (links | edit)430s (links | edit)430 (links | edit)510s (links | edit)View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500)Retrieved from " WhatLinksHere/4th_century"How can financial brands set themselves apart through visual storytelling? Our experts explainhow.Learn MoreThe Motorsport Images Collections captures events from 1895 to todays most recentcoverage.Discover The CollectionCurated, compelling, and worth your time. Explore our latest gallery of EditorsPicks.Browse Editors' FavoritesHow can financial brands set themselves apart through visual storytelling? Our experts explainhow.Learn MoreThe Motorsport Images Collections captures events from 1895 to todays most recentcoverage.Discover The CollectionCurated, compelling, and worth your time. Explore our latest gallery of EditorsPicks.Browse Editors' FavoritesHow can financial brands set themselves apart through visual storytelling? Our experts explainhow.Learn MoreThe Motorsport Images Collections captures events from 1895 to todays most recentcoverage.Discover The CollectionCurated, compelling, and worth your time. Explore our latest gallery of EditorsPicks.Browse Editors' FavoritesMechanisms in cybersecurity refer to the various tools, methods, or processes designed to protect systems and data. These include encryption algorithms, access control systems, firewalls, intrusion detection/prevention systems (IDS/IPS), and secure coding practices. Each mechanism serves a specific purpose in safeguarding digital environments from threats like malware, hacking, and data breaches. A layered security approach, using multiple mechanisms in tandem, is essential for creating a robust defence against the ever-evolving landscape of cyber threats.Cyberly strives to stay free, and we rely on donations to make it possible. If our content has helped you, please consider donatingyour contribution helps keep the site running and allows us to keep creating valuable content.Your support will help keep this knowledge free and accessible to everyone, now and in the future.Donate Now Authentication Be Bypass Can Mechanisms To Used XSSCross-Site Scripting (XSS) attacks are a critical security vulnerability affecting many web applications. By injecting malicious scripts into web pages, attackers can exploit a sites client-side code to perform a variety of malicious actions, such as stealing sensitive information, redirecting users to phishing sites, or compromising the integrity of the web application itself. One of the most alarming potential consequences of XSS attacks is their ability to bypass authentication mechanismsthe very systems designed to protect users accounts and ensure that only authorised individuals have access to specific resources.Antivirus Attacks Bypass Do Escalation Firewalls How Like Mechanisms Or Privilege SecurityIn modern cybersecurity, privilege escalation attacks present a significant threat to organisations and individuals alike. These attacks allow an attacker to gain higher-level access to a system than they are authorised for, often giving them full control of the targeted machine. While the focus of many security strategies lies on preventing initial access to a system, the real damage often occurs once an attacker manages to elevate their privileges. One of the most insidious aspects of privilege escalation attacks is their ability to bypass traditional security mechanisms, such asantivirus softwareandfirewalls.Authentication Do For How Hydra Mechanisms Testing Use YouAuthentication mechanisms are the first line of defence for most digital systems, ensuring that only authorised users can access sensitive resources. With the rise of cyber threats, it has become essential for organisations to regularly test the strength of their authentication systems to ensure they are secure. One of the most effective tools for testing authentication mechanisms is Hydra, a popular password-cracking tool used by security professionals for penetration testing and vulnerability assessments.Bypass CAPTCHA Do How In Injection Mechanisms SQL SQLmap With YouSQLmap is a powerful tool that automates the process of detecting and exploiting SQL injection vulnerabilities in web applications. While it is widely used for security testing and vulnerability assessments, one of the challenges faced during these processes is bypassing mechanisms like CAPTCHAs (Completely Automated Public Turing tests to tell Computers and Humans Apart). CAPTCHAs are widely used on websites to prevent automated bots from interacting with the site, making it harder for attackers to carry out tasks such as brute force attacks, data scraping, or SQL injection testing.An Attacker Authentication Bypass Does How MechanismsAuthentication mechanisms are the cornerstone of cybersecurity, designed to verify the identity of users, devices, or systems before granting access to sensitive resources. They serve as the first line of defence in protecting systems and data from unauthorised access. However, cybercriminals are constantly developing new techniques to bypass these mechanisms, enabling them to exploit vulnerabilities and gain unauthorised access to systems. Cyber security is the practice of protecting digital devices, networks, and sensitive data from cyber threats such as hacking, malware, and phishing attacks." It involves a range of strategies, technologies, and best practices designed to safeguard computers, networks, and data from cyber attacks.What is Cyber SecurityCyber Security involves using specialized tools to detect and remove harmful software while also learning to identify and avoid online scams. Practicing good cybersecurity habits helps keep your data private and ensures a safe online experience. It's also referred to as Information Security (INFOSEC), Information Assurance (IA), or System Security.What is Cyber Security? (Definition & Importance)Cybersecurity is all about protecting your computer, phone, or any digital device from hackers and online threats. It keeps your personal information, bank details, files, and online activity safe from being stolen, damaged, or misused. By acquiring knowledge of cyber attacks and cyber security we can secure and defend ourselves from various cyber attacks like phishing and DDoS attacks.Common Cyber Attacks You Should KnowAttack TypeWhat It MeansPhishingPhishing is a cyber attack where hackers trick users into revealing sensitive data like passwords, banking details, or session tokens through fake emails, messages, or websites. It uses social engineering to impersonate trusted sources and often includes malicious links or attachments to steal information.DDoS (Distributed Denial of Service)Hackers flood a website or server with too much traffic, so it slows down or crashes. Its like a traffic jam that blocks real users from getting in.Every day, there are cyberattacks happening around the world. Without basic protection, anyoneindividuals or companiescan become a victim. Thats why knowing about cybersecurity is just as important as locking your house.One crucial aspect of cybersecurity is Encryption, which ensures that sensitive information remains private and readable only to authorized users. This is especially important for financial transactions, personal communications, and corporate databases to prevent data theft and unauthorized accessIn short, cybersecurity keeps your online world safe and secure. It ensures that sensitive information remains confidential, intact, and accessible only to authorized users. Whether it's securing personal information, financial transactions, or corporate databases.Start your Cybersecurity journey with: Cyber Security TutorialTypes of CybersecurityThere are seven types of cyber security, each explained below in detail with uses and functions:It focuses on securing computer networks from unauthorized access, data breaches, and other network-based threats. This involves implementing technologies such as Firewalls, Intrusion detection systems (IDS), Virtual private networks (VPNs), and Network segmentation as well as deploying antivirus software Using public Wi-Fi in locations like cafes and malls poses significant security risks. Malicious actors on the same network can potentially intercept your online activity, including sensitive information. If you use payment gateways on these unsecured networks, your financial data could be compromised because these open networks dont have proper security layers, which means anyoneeven hackerscan watch what you're doing online.So, use a secure private network or VPN to protect your internal network from outside threats2. Application Security (Ensuring Secure Software and Apps)Concerned with securing software applications and preventing vulnerabilities that could be exploited by attackers. It involves secure coding practices, regular software updates and patches, and application-level firewalls.Most of the Apps that we use on our cell phones are Secured and work under the rules and regulations of the Google Play Store.There are 3.553 million applications in Google Play, Apple App Store has 1.642 million, and Amazon App Store has 483 million available for users to download. With so many choices, its easy to assume all apps are safebut thats not true.Some apps pretend to be secure, but once installed, they collect personal data and secretly share it with third-party companies.The app must be installed from a trustworthy platform, not from some 3rd party website in the form of an APK (Android Application Package).Focuses on protecting sensitive information from unauthorized access, disclosure, alteration, or destruction. It includes Encryption, Access controls, Data classification, and Data loss prevention (DLP) measures.Incident response refers to the process of detecting, analyzing, and responding to security incidents promptly.Promoting security awareness among users is essential for maintaining information security. It involves educating individuals about common security risks, best practices for handling sensitive information, and how to identify and respond to potential threats like phishing attacks or social engineering attempts.Encryption is the process of converting information into an unreadable format (ciphertext) to protect it from unauthorized access.4. Cloud Security (Defending Cloud Storage and Applications)It involves securing data, applications, and infrastructure hosted on cloud platforms, and ensuring appropriate access controls, data protection, and compliance. It uses various cloud service providers such as AWS, Azure, Google Cloud, etc., to ensure security against multiple threats.Cloud-based data storage has become a popular option over the last decade. It enhances privacy if configured and managed correctly and saves data on the cloud, making it accessible from any device with proper authentication.These platforms offer free tiers for limited usage, and users must pay for additional storage or servicesIt is a cloud service provider that offers a wide range of services, including storage, computing, and security tools.5. Endpoint Security (Protecting Devices like Laptops & Phones)Refers to securing individual devices such as computers, laptops, smartphones, and IoT devices. It includes antivirus software, intrusion prevention systems (IPS), device encryption, and regular software updates.Antivirus and Anti-malware software that scans and detects malicious software, such as Viruses, Worms, Trojans, and Ransomware. These tools identify and eliminate or quarantine malicious files, protecting the endpoint and the network from potential harm.Firewalls are essential components of endpoint security. They monitor and control incoming and outgoing network traffic, filtering out potentially malicious data packets.Keeping software and operating systems up to date with the latest security patches and updates is crucial for endpoint security.6. Operational Security (Managing Internal Security Protocols)Refers to the processes and policies organizations implement to protect sensitive data from internal threats and human errors. It involves access controls, risk management, employee training, and monitoring activities to prevent data leaks and security breaches.Access Controls ensure that only authorized personnel can access critical systems and sensitive information. This includes role-based access, multi-factor authentication (MFA), and least privilege principles.Risk Management involves identifying, analyzing, and mitigating security risks within an organization. It includes regular security assessments, vulnerability testing, and compliance audits.Employee Training is crucial for preventing insider threats and social engineering attacks. Organizations conduct cybersecurity awareness programs to educate employees on phishing scams, password security, and data handling best practices.Monitoring & Incident Response includes tracking user activity, detecting suspicious behavior, and responding to security incidents in real time. Security Information and Event Management (SIEM) tools help organizations analyze and mitigate threats effectively.7. Internet of Things (IoT) SecurityRefers to protecting internet-connected devices such as smart home gadgets, industrial sensors, medical equipment, and wearable technology from cyber threats. IoT security ensures that these devices do not become entry points for hackers to exploit networks and steal sensitive data.Device Authentication & Encryption ensures that only authorized devices can connect to networks. Encryption protects data transmitted between IoT devices and servers from interception.Firmware & Software Updates are crucial to patch security vulnerabilities. Regular updates help prevent exploitation by cybercriminals who target outdated IoT firmware.Network Segmentation isolates IoT devices from critical systems, reducing the risk of widespread attacks if one device is compromised. This approach limits unauthorized access and lateral movement within a network.IoT Security Standards & Compliance include implementing industry security frameworks like Zero Trust Architecture (ZTA) and following best practices such as strong password policies, secure APIs, and endpoint protection to enhance IoT device security.Why is Cybersecurity is Important?Cyber Security is important because the government, corporations, and medical organizations, collect military, financial, process, and store unprecedented amounts of data on a computer and other properties like personal information, and this private information exposure could have negative consequences.In 1972, when the internet was just starting (called ARPANET at the time), a test virus named Creeper was createdand then another program called Reaper was made to remove it. This early experiment showed why digital security was needed and helped start what we now call cybersecurity.Rising Cyber Threats: How Hackers Exploit Weak SecurityCybercriminals are constantly finding new ways to exploit vulnerabilities in systems, networks, and personal devices. Weak passwords, outdated software, and