

Click to prove
you're human



Mapping definition math

In set theory, a **mapping** (also known as a **function** or **map**) is a special type of binary relation between two sets, A and B. It consists of an ordered triple: A, B, and G. f (the graph), where G, f is a subset of A x B that satisfies certain conditions. The first condition says that if there are multiple outputs for the same input, then they must be equal. The second condition says that the mapping is defined for every element in A. The domain of the mapping is set A, and the codomain is set B. The graph G, f represents the entire mapping. Two mappings are considered equal if their domains, codomains, and graphs are all equal. A mapping can be restricted to a subset of its original domain, or it can be extended to include more elements in its domain. In the latter case, the restricted mapping is often denoted as f|A1, where A1 is the smaller domain. When two mappings have the same graph, they are considered equal. However, if we only consider the graphs of the mappings, then the concept of surjectivity (i.e., every element in the codomain has an output) does not apply. Two mappings can be composed together if the codomain of one is a subset of the domain of the other. The composition of two mappings g and f is denoted as g o f o f, and it represents the mapping from A to D, where D is the codomain of g. Finally, every mapping induces two new mappings between the power sets of its original domains and codomains. These induced mappings are called F (the image) and F-1 (the inverse image).
Reprinted: (Undergraduate Texts in Mathematics) New York, etc., Springer, 1974.
How to Cite This Entry: Mapping Encyclopedia of Mathematics URL: the free encyclopedia that anyone can edit 117838 active editors 6991218 articles in English
The United States Navy transported troops across the Rhine at Oberwesel during World War II from January 1945 to May 8. American logistics supported operations in Northwest Europe against a backdrop of thaws, rains, and floods. The Allies had to navigate through the Rhineland before crossing the formidable barrier posed by the Rhine river itself. In the final push into Germany's heartland, combat losses decreased while fuel and spare parts shortages emerged as expected in fast-moving mobile operations. Railheads were advanced with network rehabilitation keeping pace and an express service was organized to transport supplies from railheads to forward units. 1643 - The First English Civil War saw the first siege of Wardour Castle end after six days with Lady Blanche Arundell's Royalist garrison surrendering. 1842 - A train derailed and caught fire near Versailles, France, killing at least 52 people. 1927 - French aviators Charles Nungesser and François Coli disappeared while attempting to make the first non-stop flight from Paris to New York. 1963 - In Huế, South Vietnam, soldiers opened fire on Buddhist protesters against a government flag ban, killing nine and sparking the Buddhist crisis. 1972 - Four members of Black September hijacked Sabena Flight 571 to demand the release of 315 Palestinians convicted on terrorism charges. **Major Events in 1643** * February 6: The Taj Mahal, one of the Seven Wonders of the World, was opened to the public for the first time. * May 14: King Louis XIII of France died at age 41 and his four-year-old son Louis XIV succeeded him as king. * Battle of Rocroi: French forces defeated the Spanish in a major battle during the Thirty Years' War. **Other Notable Events** * Abel Tasman, a Dutch explorer, sighted the island of Tonga on January 21 and later discovered the Fiji Islands. * The English Civil War began with the First Battle of Middlewch, where Parliamentarian forces defeated Royalist supporters of King Charles I. * Amål, Sweden was granted its city charter on April 1. **Other Information** * This year marked the beginning of Louis XIV's long reign as king of France, which would last for 72 years and make him one of the longest-reigning monarchs in European history. * The Gregorian calendar was 10 days ahead of the Julian calendar at this time. Here is a rewritten version of the text with added spelling errors (SE), following the specified probability. Rocroi in Francece The New England Confederation is formed as a military alliense between Massachusetts Bay Colony, Plymouth Colony, Saybrook Colony (Connecticut), and New Haven Colony.[3] May 20 - Dutch expedition to Valdivia: The Dutch fleet (led by Hendrik Brouwer) is spotted off Carelmapu in Chile, soon afterwards landin nearby and plundering the fort and village. June 30 - First English Civil War: Battle of Adwalton Moor - Royalists gain control of Yorkshire. July 1 - The Westminster Assembly of theologians ("divines") and parliamentarians is convened at Westminster Abbey with the aim of restructuring the Church of England. July 5 - First English Civil War: Battle of Lansdowne - Royalists gain a pyrrhic victory over the Parliamentarians near Bath, Somerset. July 13 - First English Civil War: Battle of Roundway Down - Henry Wilmot, newly created Baron Wilmot, commanding Royalist cavalry, wins a crushin victory over Parliamentarian Sir William Waller.[4] August 24 - Dutch expedition to Valdivia: A Dutch fleet establishes a new colony in the ruins of Valdivia in southern Chile. September 20 - First English Civil War: First Battle of Newbury - A strategic Parliamentarian victory is made over Royalist forces who are led personally by King Charles.[5] October 8 - The Shunzhi Emperor of China is crowned at five years old, 17 days after the death of his father and the decision of the Deliberative Council of Princes and Ministers. October 28 - Dutch expedition to Valdivia: The Dutch end their occupation of Valdivia in Chile. November 14 - Empress Meishō abdicates and Emperor Go-Kōmyō accedes to the throne of Japan. November 24 - Thirty Years' War: Battle of Tuttlingen - France is defeated by forces of the Holy Roman Empire. December 12 - Swedish Field Marshal Lennart Torstenson's forces enter Danish territory in Holstein, beginninh the Torstenson War. December 13 - First English Civil War: At the Battle of Alton in Hampshire, the Parliamentarians defeat the Royalists. December 25 - Christmas Island in the Indian Ocean is sighted and named by Captain William Mynors of the British East India Company ship Royal Mary.[6] December 28 - Dutch expedition to Valdivia: The failed Dutch expedition arrives back at Recife in Dutch Brazil. Baden-Baden is pillaged by the French. An Calbhach mac Aedh O Conchobhair Donn, The O Conchubhair Donn, Chief of the Name of the Clan Ó Conchubhair, is popularly inaugurated as the last King of Connacht in Ireland. Evangelista Torricelli invents the mercury barometer. Paul de Chomedey, Sieur de Chomedey, places the first Mount Royal Cross atop Mount Royal above Montreal. Jean Bolland publishes the two first volumes of the Acta Sanctorum (in Antwerp). This is the begining of the Bollandists' work. Miyamoto Musashi begins to dictate The Book of Five Rings (Go Rin No Sho) to his student; he will complete it in 1654, just before his death. Roger Williams, co-founder of Rhode Island, publishes A Key into the Language of America. The first professional book publisher to use printing press in Norway is established in Oslo.[7] Mary of Jesus de León y Delgado Louis Moréri Gilbert Burnet Bahadur Shah I René-Robert Cavalier, Sieur de La Salle January 2 - Eleonora d'Este, Italian princess, later nan (d. 1722) January 4 (N.S.) - Sir Isaac Newton, English scientist (d A list of notable individuals who passed away on specific dates throughout January to September 1700 and into early 1701. The list includes politicians, clergy members, military leaders, artists, and monarchs from various countries such as England, Italy, Sweden, France, Spain, Germany, Croatia, Ottoman Empire, Japan, and others. The individuals on this list include notable figures like Sir Samuel Grinston, a British politician; Eleonora Pacello, an Italian Catholic prelate; Axel Wachtmeister, a Swedish field marshal; Charles Sackville, an English poet; Johann Kasimir Kolbe von Wartenberg, a Prussian politician; Garcia Felipa de Legazpi y Velasco Altamirano y Albornoz, a Spanish Catholic prelate; Sultan Ahmed II of the Ottoman Empire; Christian Franz Paullini, a German physician; and many others. The list spans multiple countries and includes notable figures from various fields such as politics, art, literature, and science. In October: * Zinat-un-Nissa, princess of the Mughal Empire, died in 1705. * Bahadur Shah I, Mughal Emperor of India, died in 1712. * Georg Ludwig Agricola, German composer, was born in 1676. In November: * John Strype, English historian and biographer, was born in 1737. * Asano Nagatomo, Japanese daimyō who ruled the Akō Domain, was born in 1675. * Jean Chardin, French jeweller and traveller, was born in 1713. * René-Robert Cavalier, Sieur de La Salle, French explorer, died in 1687. * Eberhard von Danckelmann, Prussian politician, was born in 1722. In December: * Israel Kolmodin, Swedish hymnwriter and priest, died in 1709. * Salomon van Til, theologian of the Dutch Reformed Church, died in 1713. * Ilona Zrínyi, Hungarian heroine, died in 1703. * Marie Grubbe, Danish countess, died in 1718. * Eva Krotowa, Khoi translator and interpreter, died in 1674. In January: * John Bois, English scholar, was born in 1560. * Henry Danvers, 1st Earl of Danby, English noble, was born in 1573. * Countess Palatine Anna Maria of Neuburg, Duchess of Saxe-Altenburg, was born in 1575. In February: * Countess Juliane of Nassau-Siegen, Landgravine of Hesse-kassel, was born in 1587. * Marco da Gagliano, Italian composer, was born in 1582. * Girolamo Frescobaldi, Italian composer, was born in 1593. In March: * Rustam Khan, Georgian-Iranian soldier, was born around 1598. In April: * Simon Episcopius, Dutch theologian, was born in 1583. * Louis I, Count of Erbach-Erbach (1606-1643), was born in 1579. * Nicolaus Hunnius, German theologian, was born in 1565. In May: * King Louis XIII of France was born in 1601. In July: * François Duquesnoy, Flemish Baroque sculptor in Rome, was born in 1597. * Robert Pirrepoint, 1st Earl of Kingston-upon-Hull, English statesman, was born in 1584. In August: * Anne Hutchinson, English Puritan preacher, was born in 1591. * Margaret of Brunswick-Lüneburg, German noble, was born in 1573. * Johann Georg Wirsung, German anatomist, was born in 1589. In September: * Richard Boyle, 1st Earl of Cork, Irish politician, was born in 1566. * Lucius Cary, 2nd Viscount Falkland, English politician and writer, died in battle around 1610. * Robert Dormer, 1st Earl of Carmarvon, died in battle around 1610. * Henry Spencer, 1st Earl of Sunderland, was born in 1620. In October: * Jean Challeite, French painter, was born in 1581. * Brillianna, Lady Harley, English noble, letter writer and war heroine, was born in 1598. In November: * John Bainbridge, English astronomer, was born in 1583. * Paul Guldin, Swiss astronomer and mathematician, was born in 1577. * Sun Chuanting, Ming dynasty general, was born in 1593. * Henry Hastings, 5th Earl of Huntingdon, English noble, was born in 1586. In December: * John Pym, English statesman, was born in 1583. Herman Wrangel, Swedish soldier and politician (b. 1584/1587) Arthur Bell, English Franciscan martyr (b. 1590) Henry Clifford, 5th Earl of Cumberland, English politician (b. 1591) December 30 Giovanni Baglione, Italian painter and historian of art (b. 1566), approx. date Henry Glapthorne, English dramatist (b. 1610), date unknowna Sophia Brahe, Danish astronomer and horticulturalist (b. 1556) Maria Pita, Spanish heroine (b. 1565) Around the turn of the 17th century, depending on the calendar used - either Julian or Gregorian - significant advancements took place in Italy and Europe. This era saw the rise of influential artists, authors, and scientists who laid the groundwork for important subjects like accounting and political science. Nicolaus Copernicus proposed a heliocentric universe, which faced strong opposition, while Tycho Brahe challenged the theory of celestial spheres through observational measurements of a Milky Way supernova. These events directly contradicted the long-held notion of an immutable universe supported by Ptolemy and Aristotle, leading to major breakthroughs in astronomy and science. Galileo Galilei became a champion of the new sciences, inventing the first thermometer and making substantial contributions in physics and astronomy, becoming a prominent figure in Europe's Scientific Revolution. Colonialism also emerged during this time, with Spain and Portugal dominating Central and South America, followed by France and England in Northern America and the Lesser Antilles. The Portuguese controlled trade between Brazil, Africa, and their possessions in the Indies, while the Spanish dominated the Greater Antilles, Mexico, Peru, and opened trade across the Pacific Ocean. English and French privateers began practicing persistent theft of Spanish and Portuguese treasures. This era of colonialism established mercantilism as a leading school of economic thought, viewing the economy as a zero-sum game where any gain by one party required a loss by another. The Reformation in central and northern Europe dealt a significant blow to the authority of the papacy and the Catholic Church. In England, Alberico Gentili wrote the first book on public international law, dividing secularism from canon law and Catholic theology. European politics became dominated by religious conflicts, with the groundwork for the Thirty Years' War being laid towards the end of the century. The Ottoman Empire continued to expand in the Middle East, while Iran and Iraq saw a major popularity of the Shia sect of Islam under the Safavid dynasty. In the Indian subcontinent, new powers emerged following the defeat of the Delhi Sultanate and Vijayanagara Empire, including the Sur Empire, Deccan sultanates, Rajput states, and the Mughal Empire founded by Emperor Babur. China was ruled by the Ming dynasty, which became increasingly isolationist and clashed with Japan over control of territories. As well as Japanese pirates, Christianity began spreading in Central Africa and Southern Africa. Most of Africa remained uncolonized until the Scramble for Africa in the late 19th century. For earlier events, see 15th century and Timeline of the Middle Ages. 1501: Michelangelo returns to Florence to work on David, while Safavid dynasty reunifies Iran, ruling until 1736 and adopting Shia Islam. In India, the Third Portuguese Armada and Kingdom of Cochín clash in the First Battle of Cannanore. 1502: African slaves are reported in the New World, and the Crimean Khanate sacks Sarai in the Golden Horde, ending its existence. 1503: Spain defeats France at the Battle of Gornigola, considered the first battle won by gunpowder small arms. Leonardo da Vinci begins painting the Mona Lisa, completing it three years later. Nostradamus is born on either December 14 or 21. 1504: A drought affects Spain, causing famine throughout the country. Isabella I of Castile dies, and Joanna of Castile becomes Queen. The Sultanate of Senнар is founded in modern Sudan by Amara Dunqas. 1505: Zhengde Emperor ascends the throne of Ming dynasty. Martin Luther enters St. Augustine's Monastery at Erfurt, Germany, marking the beginning of the Reformation. In Indonesia, Sultan Trenggono builds the first Muslim kingdom in Java, called Demak, as a way to fight against Portuguese colonization. 1506: Leonardo da Vinci completes the Mona Lisa. King Afonso I of Kongo wins the battle of Mbanza Kongo, resulting in Catholicism becoming Kongo's state religion. 1507: The first recorded epidemic of smallpox in the New World occurs on Hispaniola, devastating the native Taíno population. Portugal conquers Hormuz and Muscat, gaining control of the Persian Gulf region. 1508: The Christian-Islamic power struggle spills over into the Indian Ocean as the Battle of Chaul during the Portuguese-Mamluk War. Michelangelo paints the Sistine Chapel ceiling. 1509: The defeat of the joint fleet of the Sultan of Gujarat, Mamlūk Burji Sultanate of Egypt, and Zamorin of Calicut marks the beginning of Portuguese dominance in the Spice trade and Indian Ocean. 1508-1517 timeline 1509: Krishnadevaraya becomes king of Vijayanagara Empire. Afonso de Albuquerque conquers Goa in India and Malacca in Malaysia. Copernicus publishes Commentariolus proclaiming the Sun's central role in Solar System. Qutb Shahi dynasty rules Golconda Sultanate until 1687. Francisco Serrão leads Portuguese expedition to Spice Islands led by Henry VIII mariners Jorge Álvares arrives at Macau China during Ming dynasty. Vasco Balboa reaches Pacific Ocean via Isthmus of Panama as first European to do so. Martin Luther posts Ninety-five Theses initiating Reformation in 1517. Ottoman Empire gains decisive victory over Safavid Empire after Battle of Chaldiran. Francis I becomes King of France following Louis XII's death. Ottomans conquer Eastern Anatolia from Safavids and last beyliks of Anatolia. Ottomans defeat Mamluks gaining control of Egypt Arabia and Levant. Sweating sickness epidemic hits Tudor England. Reformation begins with Martin Luther's Ninety-five Theses in Saxony. Treaty of London established non-aggression pact between major European nations. Mir Chakar Khan Rind settles in Punjab after leaving Baluchistan. Leo Africanus captured by Spanish pirates presented to Pope Leo X. Dancing plague of 1518 begins in Strasbourg lasting one month. Leonardo da Vinci dies 21 Wang Yangming the Chinese philosopher governor of Jiangxi province 1519: The year is marked by several significant events. Barbary pirates led by Hayreddin Barbarossa raided Provence and Toulon in southern France. Meanwhile, Emperor Maximilian passed away, and Charles I became the new Holy Roman Emperor, taking on the title of Charles V. On the other side of the globe, Ferdinand Magellan embarked on a historic expedition that would circumnavigate the earth. During this time, Hernán Cortés led the Spanish conquest of the Aztec Empire, which had begun in 1519-1521. The Ottoman Empire was also expanding under the reign of Suleiman the Magnificent, who ruled from 1520 to 1566. In Africa, a European diplomatic mission arrived at Massawa, Ethiopia, in 1520. The year also saw several battles and conquests. Vijayanagara Empire forces defeated the Adil Shahi at the Battle of Raichur, while Sultan Ali Mughayat Shah expanded his empire in present-day Indonesia. The Portuguese established a trading post in Lamakera, Indonesia, and attempted to invade Ming dynasty China but were expelled. In Asia, Belgrade was captured by the Ottoman Empire, and Ferdinand Magellan encountered the Philippines. He was later killed in the Battle of Mactán in 1521. Meanwhile, Jiajing Emperor ascended the throne of Ming dynasty, China, and Pati Unus led an invasion of Malacca against the Portuguese occupation. The year 1522 saw several significant events, including the fall of Rhodes to the Ottomans and the signing of the Luso-Sundanese Treaty between Portugal and the Sundanese Kingdom. The Swedish gained independence from the Kalmar Union, and the Cacao bean was introduced to Spain by Hernán Cortés. 1525 was a pivotal year in world history as German and Spanish forces dealt a crushing blow to France at the Battle of Pavia, resulting in the capture of Francis I of France. The Ottoman Empire was also on the rise, defeating the Kingdom of Hungary at the Battle of Mohács. In 1526, the Mughal Empire was founded by Babur, marking the beginning of a new era in Indian history. Meanwhile, in Europe, the Protestant Reformation was gaining momentum, particularly in Sweden where it began to take hold. The Sack of Rome in 1527 marked the end of the Italian Renaissance and had far-reaching consequences for European politics. On the other side of the world, the Demak Sultanate emerged as a dominant power in present-day Indonesia after defeating the Majapahit Empire. This period also saw significant territorial expansion by the Ottoman Empire under Suleiman's leadership. The year 1529 was marked by a series of military victories and defeats, including the Austrians' defeat of the Ottoman Empire at the siege of Vienna. The Treaty of Zaragoza was signed, defining the antimeridian of Tordesillas and attributing the Moluccas to Portugal and the Philippines to Spain. In the Americas, Spanish conquistadors continued their conquests, while in Europe, King Henry VIII's break with the Catholic Church led to the establishment of the Church of England. The Inca Civil War raged on between Atahualpa and Huáscar, while Francisco Pizarro led the Spanish conquest of the Inca Empire. The foundation of São Vicente, the first permanent Portuguese settlement in the Americas, marked a significant milestone in 1532. Anne Boleyn became Queen of England in 1533, only to be executed for adultery and treason later that year. Elizabeth Tudor was born during this year, while Jacques Cartier claimed Canada for France. The Ottoman Empire continued its expansion under Suleiman's leadership, capturing Baghdad from the Safavids in 1534. The Affair of the Placards saw King Francis I increase his repression of French Protestants, while the Münster Rebellion attempted to establish a theocracy among radical Anabaptists. In 1535, the Portuguese explorer Sultan Tabarji and sent him to Portugal where he converted to Christianity. Catherine of Aragon died in Kimbolton Castle that year, marking the beginning of Anne Boleyn's downfall. The establishment of the Inquisition in Portugal and the foundation of Buenos Aires by Pedro de Mendoza also took place during this period. The Portuguese established Recife in Pernambuco, north-east Brazil in 1537, while William Tyndale published a partial translation of the Bible into English that year. Gonzalo Jiménez de Quesada found Bogotá's predecessor city in 1538, marking the beginning of Colombia's rich history. 1538: Ottoman Turks defeat the Spanish-Venetian fleet at the Battle of Preveza. Hernando de Soto explores inland North America. 1540: The Society of Jesus, or Jesuits, is founded by Ignatius of Loyola and six companions with Pope Paul III's approval. Sher Shah Suri establishes the Suri dynasty in South Asia, defeating Humayun in the Battle of Bilgram on May 17. 1541: Pedro de Valdivia founds Santiago in Chile. Francisco de Orellana encounters and explores the Amazon River. Charles V of Spain leads an unsuccessful Algerian military campaign. 1541: The Ottoman Empire captures Buda and absorbs most of Hungary. Sahib I Giray invades Russia. 1542: The Italian War resumes between Francis I of France and Emperor Charles V, with Henry VIII allied with the Emperor and James V of Scotland and Sultan Suleiman I allied with the French. Akbar the Great is born in Umarkot Fort. 1542: Spanish explorer Ruy López de Villalobos names the islands of Samar and Leyte "Las Islas Filipinas" in honor of Philip II of Spain, making it the official name of the archipelago. 1543: Ethiopian-Portuguese troops defeat the Adal army at the Battle of Wayna Daga. Imam Ahmad Gurey is killed. Copernicus publishes his theory that Earth and other planets revolve around the Sun. 1543: The Nanban trade period begins after Portuguese traders contact Japan. 1544: French forces defeat an Imperial-Spanish army at the Battle of Ceresole. 1544: The Battle of the Shirts takes place in Scotland, with the Frasers and Macdonalds fighting over a disputed chieftship; reportedly, five Frasers and eight Macdonalds survive. 1545: Songhai forces sack the Malian capital of Niamei. The Council of Trent meets for the first time in Trent, Italy. 1546: Michelangelo Buonarroti is made chief architect of St. Peter's Basilica. Francis Xavier works among the peoples of Ambon, Ternate, and Motael, laying the foundations for a permanent mission. 1547: Henry VIII dies at the Palace of Whitehall on January 28 at age 55. Francis I dies in the Château de Rambouillet on March 31 at age 52. Edward VI becomes King of England and Ireland on January 28 and is crowned on February 20 at age 9. 1547: Mercator Charles V decisively dismantles the Schmalkaldic League at the Battle of Mühlberg. Grand Prince Ivan the Terrible is crowned tsar of Russia, becoming the first Russian tsar. 1548: The Battle of Uedahara takes place in Japan, with firearms used for the first time on the battlefield and Takeda Shingen defeated by Murakami Yoshikiyo. Askia Daoud establishes public libraries in Timbuktu. 1548: The Ming dynasty government of China issues a decree banning all foreign trade and closes down all seaports along the coast; these Hai jin laws come during the Wokou wars with Japan. 1559: Sultan Hairun of Ternate (Indonesia) protests Christianisation activities by Portuguese, leading to hostilities. 1549: Tomé de Sousa establishes Salvador in Brazil; Arya Penangsang avenges Raden Kikih's death by sending Rangku to kill Sunan Prawoto. 1550: Mimar Sinan builds Süleymaniye Mosque in Istanbul; Mongols, led by Altan Khan, invade China and besiege Beijing. 1550-1551: Valladolid debate on human rights of Indigenous Americas. 1551: John Caius writes first contemporary account of sweating sickness symptoms. 1551: North African pirates enslave entire Gozo population, sending them to Libya. 1552: Russia conquers Khanate of Kazan in central Asia; Jesuit China Mission's Francis Xavier dies. 1553: Mary Tudor becomes England's first queen regnant, restoring Church of England under Papal authority; Portuguese found settlement at Macau. 1554: Missionaries José de Anchieta and Manuel da Nóbrega establish São Paulo in Brazil; Princess Elizabeth imprisoned in Tower of London for suspected involvement in Wyatt rebellion. 1555: Muscovy Company becomes first major English joint-stock trading company. 1556: Publication of Delle Navigazionei et Viaggi by Giovanni Battista Ramusio, SHAANXI earthquake in China is deadliest known during Ming dynasty. 1556: Georgius Agricola publishes De re metallica; Akbar defeats Hemu at Second battle of Panipat; Russia conquers Astrakhan Khanate. 1556-1605: Akbar expands Mughal Empire through conquests in Indian subcontinent. 1557: Habsburg Spain declares bankruptcy; Portuguese settle in Macau; Ottomans capture Massawa, isolating Ethiopia from rest of world. 1558: Elizabeth Tudor becomes Queen Elizabeth I at age 25; Livonian War between Poland, Lithuania, Sweden, Denmark and Russia begins. 1558-1603: The Elizabethan era is considered the height of English Renaissance. 1559: Peace of Cateau Cambrésis concludes Italian Wars. 1560s: A Century of Turmoil and Transformation Elizabeth Bathory, the infamous Hungarian countess, was born in Nyirbator. Oda Nobunaga solidified his position as a pre-eminent warlord in Japan after winning the Battle of Okehazama. Jeanne d'Albret declared Calvinism the official religion of Navarre, marking an important milestone in the Protestant Reformation. Sir Francis Bacon was born in London, destined to become one of the most influential thinkers of his time. The Uesugi and Takeda clans clashed in the fourth battle of Kawanakajima at Hachimanbara. Guido de Bres drew up the Belgic Confession of Protestant faith, furthering the spread of Calvinism across Europe. Akbar, the Mughal emperor, reconciled Muslim and Hindu factions by marrying into a powerful Rajput Hindu caste. The French Wars of Religion between Catholics and Huguenots escalated, with massacres in Wassy and Dreux. Portuguese Dominican priests built a palm-trunk fortress in Macau, which was later destroyed by Javanese Muslims but rebuilt from more durable materials. A devastating plague outbreak claimed 80,000 lives in Elizabethan England, with over 20,000 dying in London alone. Galileo Galilei was born on February 15th and would go on to become a pivotal figure in the Scientific Revolution. William Shakespeare was baptized on April 26th, marking the beginning of his illustrious career as a playwright and poet. The Deccan sultanates defeated the Vijayanagara Empire at the Battle of Talikota, shifting the balance of power in India. Estácio de Sá established Rio de Janeiro in Brazil, setting the stage for Portuguese colonization. The Hospitallers defeated the Ottoman Empire at the siege of Malta, marking a significant victory for Christian forces. Miguel López de Legazpi founded the first Spanish settlement in the Philippines, starting a period of Spanish dominance that would last centuries. Andrés de Urdaneta discovered the maritime route from Asia to the Americas across the Pacific Ocean, revolutionizing global trade and navigation. The Royal Exchange was founded by Thomas Gresham, further solidifying London's position as a hub of commerce. Suleiman the Magnificent died on September 7th during the siege of Szigetvár, paving the way for his successor to claim the Ottoman throne. The Eighty Years' War between Spain and the Netherlands continued, with the Dutch seeking independence from Spanish rule. Cipriano de Rore composed the Da le Ballo Contrade d'Oriente, a masterpiece of Renaissance music. The Jiajing Emperor died in the Forbidden City, marking the end of his 45-year reign and the ascension of Longqing to the Ming dynasty throne. Mary, Queen of Scots, was imprisoned by Elizabeth I, sparking a conflict that would have far-reaching consequences for Scotland and England. The Transylvanian Diet promulgated the Edict of Torda, a groundbreaking law of freedom of religion and conscience. The Morisco Revolt in Spain continued to simmer, threatening the stability of the kingdom. The Azuchi-Momoyama period in Japan saw significant conflict and power struggles between warlords. Hadiwijaya sent his son Sutowajaya to kill Arya Penangsang, setting the stage for the founding of the Mataram dynasty in Indonesia. The Rising of the North in England took place, marking a significant threat to the stability of the kingdom. Gerardus Mercator published his famous world map, further solidifying London's status as a hub of cartography and exploration. The Polish-Lithuanian Commonwealth was created with the Union of Lublin, lasting until 1795. A peace treaty was signed between Sultan Hairun of Ternate and Governor Lopez De Mesquita of Portugal, marking a significant moment in Suleiman's diplomatic efforts. Ivan the Terrible ordered the execution of several nobles, further solidifying his grip on power in Russia. 1570: A papal bull is issued by Pope Pius V, excommunicating those who support Elizabeth I and calling on Catholics to rebel against her. In Indonesia, Sultan Hairun was killed by the Portuguese, replaced by Babullah. In Cyprus, 20,000 people were massacred and all buildings were looted after the Ottomans took control of the following year. 1571: The Holy League navy destroyed the Ottoman Empire's fleet at Lepanto. Crimean Tatars attacked Moscow, burning most of it except for the Kremlin. American Indians killed Spanish missionaries in what is now Jamestown, Virginia. In the Philippines, Miguel López de Legazpi established Manila as the capital of the Spanish East Indies. 1572: A Protestant leader was killed in Paris during a massacre that also targeted Huguenots. The first edition of Luis Vaz de Camões' epic poem, The Lusíads, was published three years after he returned from his travels. In China, Taizi became emperor at age 9 as the Wanli Emperor. 1573: After a long siege, Haarlem fell to the Spanish. In the Eighty Years' War, Middelburg declared support for the Protestants. The Dutch rebel victory in Leiden ended a four-month-long siege. Oda Nobunaga captured Nagashima fortress after five years of fighting. 1576: The Battle of Haldighati took place between the ruler of Mewar and the Mughal Empire's forces. Sackings occurred at Antwerp and other cities during this period. Francis Drake circumnavigated the globe from 1577-1580. A king built a palace in Indonesia, while another king died and a new one was declared Dalai Lama. 1578: The Portuguese established a fort on Tidore but focused their activities in Maluku on Ambon. Governor-General Francisco de Sando declared war against Brunei. The Spanish Netherlands, Austrian Netherlands and Belgium. The Irish Gaelic chieftain's feast in 1579: Sir Francis Drake passes through Maluku and enters Ternate on his circumnavigation of the world. Portuguese establish a fort on Tidore but Ambon becomes main centre for activities.[16] Fall of Spanish Armada 1580: Royal reception after attacks on Spanish possessions influences Philip II of Spain to build up Spanish Armada. English ships in Spanish harbours are impounded. 1580: Portugal unifies with Spain under Philip II. The Portuguese Empire ends struggle for throne, and Spanish and Portuguese crowns unite for 60 years, until 1640.[16] 1580-1587: Nagasaki comes under Jesuit control. 1581: Dutch Act of Abjuration declares abjuring allegiance to Philip II of Spain. 1581: Bayinnaung dies at 65. Oda Nobunaga commits seppuku in Japan's Honnō-ji incident.[16] 1582: Pope Gregory XIII issues Gregorian calendar, replacing Julian calendar. The last day of the Julian calendar was Thursday, October 4, 1582, followed by first day of the Gregorian calendar on Friday, October 15, 1582. 1582: Yermak Timofeyevich conquers Siberia Khanate for Stroganovs. 1583: Denmark builds world's first theme park, Bakken. Death of Sultan Babullah of Ternate. 1584-1585: After Antwerp siege, many merchants flee to Amsterdam. At its peak between 1510 and 1557, Antwerp was earning Spanish crown seven times more revenues than the Americas[17] 1584: Ki Ageng Pemanahan dies. Sultan Pajang raises Sutowajaya as new ruler in Mataram. 1585: Akbar annexes Kashmir. Portuguese colony established at Roanoke in North America. 1585-1604: Anglo-Spanish War fought on both sides of the Atlantic. 1587: Mary, Queen of Scots executed by Elizabeth I. Reign of Abbas I marks zenith of Safavid dynasty. 1588: Mataram becomes kingdom with Sutowajaya as Sultan, titled "Senapati Ingalaga Sayidin Panatagama". England repulses Spanish Armada. 1589: Spain repulses English Armada. Catherine de' Medici dies at aged 69. 1590: Siege of Odawara, Go-Hojo clan surrender to Toyotomi Hideyoshi, unifying Japan. 1591: Gazi Giray leads Tatar expedition against Moscow. Moroccan forces defeat Songhai Empire in Mali. 1592-1593: John Stow reports 10,675 plague deaths in London.[18] 1592-1598: Korea repels two Japanese invasions with Ming dynasty China's help. The late 16th century was a time of significant events and discoveries. Alessandro Valignano founded St. Paul's College in Macau in 1594. In the same year, Cornelis de Houtman led the first Dutch expedition to Indonesia with two hundred and forty-nine men and sixty-four cannons. 16th Century Inventions and Discoveries: A Pivotal Era in Human History. Major breakthroughs occur during this period, transforming various aspects of life. Spinning Wheel Revolutionizes Textile Production: The introduction of the spinning wheel in Europe marked a significant shift in textile production, making it more efficient and widespread. Language and Alphabets: The letter J is added to the English alphabet, while other languages undergo changes in spelling and pronunciation. Timekeeping Innovations: Peter Henlein creates the first portable watch, a major milestone in timekeeping technology. Galileo Galilei's observations on pendulums pave the way for more accurate clocks. Explorers Chart New Territories: Juan Ponce de León sights Florida, while Vasco Núñez de Balboa discovers the eastern edge of the Pacific Ocean. Ferdinand Magellan and Juan Sebastián Elcano lead the first circumnavigation of the world. Scientific Advancements: The modern square root symbol (√) is introduced. Copernicus publishes his theory on a heliocentric universe, and Gerolamo Cardano develops the concept of complex numbers. Artistic Expressions: Opera emerges in Florence, with Jacopo Peri's performance marking the beginning of this art form. Conrad Gessner invents the graphite pencil, which becomes an essential tool for artists. Mathematical Contributions: Gerardus Mercator creates the first Mercator projection map, allowing for more accurate navigation and exploration. Galileo Galilei identifies the constant swing of a pendulum, leading to further breakthroughs in timekeeping. Cultural Shifts: The Gregorian calendar is introduced by Pope Gregory XIII, replacing the Julian calendar in Catholic countries. The Iberian Union under Philip II brings together Spain and Portugal, while the Spanish establish settlements in Florida and Georgia. Ricklefs, in his 1991 publication, provided information on national epidemics of plague in England between 1348 and 1665. Additionally, the Sweating Sickness, a significant event in London's history, was documented. The life span of Suleiman the Magnificent, from 1494 to 1566, was also recorded by Travels Arlinghous. Ricklefs' work (1991) further mentioned the Terra De Hochelaga, Jacques Cartier's journey to Hochelaga, and the Lusíads, a literary work from 1800 to 1882. The Dalai Lama and the Emperor of China: A Political History of the Tibetan Institution of Reincarnation by Peter Schwieger (2014) and To The Spice Islands and Beyond: Travels in Eastern Indonesia edited by George Miller (1996) were also referenced. Other notable events include the rise of the Roman Empire, as described by Polybius, and the establishment of post offices. The century was marked by significant scientific advancements, including the development of bagpipes and snare drums. Conditions impacting brain normalcy exist in various contexts including Pure Land Buddhism, a devotional offshoot within Mahayana Buddhism centered around Amitabha Buddha worship. Historical events like the Boston Tea Party in 1773 also have implications on societal functioning. Notable figures such as Hernán Cortés, who conquered Mexico from 1485 to 1547, significantly impacted their respective domains. Geographical regions such as the Pyrenees Mountains have environmental and cultural significance, further affecting their surroundings.