**Entities for characters with special meaning in HTML and XHTML**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Entity** | **Entity Displayed** | **Number** | **Number Displayed** | **Description** |
| &amp; | & | &#38; | & | ampersand |
| &gt; | > | &#62; | > | greater-than sign |
| &lt; | < | &#60; | < | less-than sign |
| &quot; | " | &#34; | " | quotation mark = APL quote |

**Entities for accented characters, accents, and other diacritics from Western European Languages**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Entity** | **Entity Displayed** | **Number** | **Number Displayed** | **Description** |
| &acute; | ´ | &#180; | ´ | acute accent = spacing acute |
| &cedil; | ¸ | &#184; | ¸ | cedilla = spacing cedilla |
| &circ; | ˆ | &#710; | ˆ | modifier letter circumflex accent |
| &macr; | ¯ | &#175; | ¯ | macron = spacing macron = overline = APL overbar |
| &middot; | · | &#183; | · | middle dot = Georgian comma = Greek middle dot |
| &tilde; | ˜ | &#732; | ˜ | small tilde |
| &uml; | ¨ | &#168; | ¨ | diaeresis = spacing diaeresis |
|  | | | | |
| &Aacute; | Á | &#193; | Á | latin capital letter A with acute |
| &aacute; | á | &#225; | á | latin small letter a with acute |
| &Acirc; | Â | &#194; | Â | latin capital letter A with circumflex |
| &acirc; | â | &#226; | â | latin small letter a with circumflex |
| &AElig; | Æ | &#198; | Æ | latin capital letter AE = latin capital ligature AE |
| &aelig; | æ | &#230; | æ | latin small letter ae = latin small ligature ae |
| &Agrave; | À | &#192; | À | latin capital letter A with grave = latin capital letter A grave |
| &agrave; | à | &#224; | à | latin small letter a with grave = latin small letter a grave |
| &Aring; | Å | &#197; | Å | latin capital letter A with ring above = latin capital letter A ring |
| &aring; | å | &#229; | å | latin small letter a with ring above = latin small letter a ring |
| &Atilde; | Ã | &#195; | Ã | latin capital letter A with tilde |
| &atilde; | ã | &#227; | ã | latin small letter a with tilde |
| &Auml; | Ä | &#196; | Ä | latin capital letter A with diaeresis |
| &auml; | ä | &#228; | ä | latin small letter a with diaeresis |
| &Ccedil; | Ç | &#199; | Ç | latin capital letter C with cedilla |
| &ccedil; | ç | &#231; | ç | latin small letter c with cedilla |
| &Eacute; | É | &#201; | É | latin capital letter E with acute |
| &eacute; | é | &#233; | é | latin small letter e with acute |
| &Ecirc; | Ê | &#202; | Ê | latin capital letter E with circumflex |
| &ecirc; | ê | &#234; | ê | latin small letter e with circumflex |
| &Egrave; | È | &#200; | È | latin capital letter E with grave |
| &egrave; | è | &#232; | è | latin small letter e with grave |
| &ETH; | Ð | &#208; | Ð | latin capital letter ETH |
| &eth; | ð | &#240; | ð | latin small letter eth |
| &Euml; | Ë | &#203; | Ë | latin capital letter E with diaeresis |
| &euml; | ë | &#235; | ë | latin small letter e with diaeresis |
| &Iacute; | Í | &#205; | Í | latin capital letter I with acute |
| &iacute; | í | &#237; | í | latin small letter i with acute |
| &Icirc; | Î | &#206; | Î | latin capital letter I with circumflex |
| &icirc; | î | &#238; | î | latin small letter i with circumflex |
| &Igrave; | Ì | &#204; | Ì | latin capital letter I with grave |
| &igrave; | ì | &#236; | ì | latin small letter i with grave |
| &Iuml; | Ï | &#207; | Ï | latin capital letter I with diaeresis |
| &iuml; | ï | &#239; | ï | latin small letter i with diaeresis |
| &Ntilde; | Ñ | &#209; | Ñ | latin capital letter N with tilde |
| &ntilde; | ñ | &#241; | ñ | latin small letter n with tilde |
| &Oacute; | Ó | &#211; | Ó | latin capital letter O with acute |
| &oacute; | ó | &#243; | ó | latin small letter o with acute |
| &Ocirc; | Ô | &#212; | Ô | latin capital letter O with circumflex |
| &ocirc; | ô | &#244; | ô | latin small letter o with circumflex |
| &OElig; | Œ | &#338; | Œ | latin capital ligature OE |
| &oelig; | œ | &#339; | œ | latin small ligature oe [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#oelig) |
| &Ograve; | Ò | &#210; | Ò | latin capital letter O with grave |
| &ograve; | ò | &#242; | ò | latin small letter o with grave |
| &Oslash; | Ø | &#216; | Ø | latin capital letter O with stroke = latin capital letter O slash |
| &oslash; | ø | &#248; | ø | latin small letter o with stroke, = latin small letter o slash |
| &Otilde; | Õ | &#213; | Õ | latin capital letter O with tilde |
| &otilde; | õ | &#245; | õ | latin small letter o with tilde |
| &Ouml; | Ö | &#214; | Ö | latin capital letter O with diaeresis |
| &ouml; | ö | &#246; | ö | latin small letter o with diaeresis |
| &Scaron; | Š | &#352; | Š | latin capital letter S with caron |
| &scaron; | š | &#353; | š | latin small letter s with caron |
| &szlig; | ß | &#223; | ß | latin small letter sharp s = ess-zed |
| &THORN; | Þ | &#222; | Þ | latin capital letter THORN |
| &thorn; | þ | &#254; | þ | latin small letter thorn |
| &Uacute; | Ú | &#218; | Ú | latin capital letter U with acute |
| &uacute; | ú | &#250; | ú | latin small letter u with acute |
| &Ucirc; | Û | &#219; | Û | latin capital letter U with circumflex |
| &ucirc; | û | &#251; | û | latin small letter u with circumflex |
| &Ugrave; | Ù | &#217; | Ù | latin capital letter U with grave |
| &ugrave; | ù | &#249; | ù | latin small letter u with grave |
| &Uuml; | Ü | &#220; | Ü | latin capital letter U with diaeresis |
| &uuml; | ü | &#252; | ü | latin small letter u with diaeresis |
| &Yacute; | Ý | &#221; | Ý | latin capital letter Y with acute |
| &yacute; | ý | &#253; | ý | latin small letter y with acute |
| &yuml; | ÿ | &#255; | ÿ | latin small letter y with diaeresis |
| &Yuml; | Ÿ | &#376; | Ÿ | latin capital letter Y with diaeresis |

**Entities for punctuation characters**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Entity** | **Entity Displayed** | **Number** | **Number Displayed** | **Description** |
| &cent; | ¢ | &#162; | ¢ | cent sign |
| &curren; | ¤ | &#164; | ¤ | currency sign |
| &euro; | € | &#8364; | € | euro sign |
| &pound; | £ | &#163; | £ | pound sign |
| &yen; | ¥ | &#165; | ¥ | yen sign = yuan sign |
|  | | | | |
| &brvbar; | ¦ | &#166; | ¦ | broken bar = broken vertical bar |
| &bull; | • | &#8226; | • | bullet = black small circle [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#bull) |
| &copy; | © | &#169; | © | copyright sign |
| &dagger; | † | &#8224; | † | dagger |
| &Dagger; | ‡ | &#8225; | ‡ | double dagger |
| &frasl; | ⁄ | &#8260; | ⁄ | fraction slash |
| &hellip; | … | &#8230; | … | horizontal ellipsis = three dot leader |
| &iexcl; | ¡ | &#161; | ¡ | inverted exclamation mark |
| &image; | ℑ | &#8465; | ℑ | blackletter capital I = imaginary part |
| &iquest; | ¿ | &#191; | ¿ | inverted question mark = turned question mark |
| &lrm; | ‎ | &#8206; | ‎ | left-to-right mark (for formatting only) |
| &mdash; | — | &#8212; | — | em dash |
| &ndash; | – | &#8211; | – | en dash |
| &not; | ¬ | &#172; | ¬ | not sign |
| &oline; | ‾ | &#8254; | ‾ | overline = spacing overscore |
| &ordf; | ª | &#170; | ª | feminine ordinal indicator |
| &ordm; | º | &#186; | º | masculine ordinal indicator |
| &para; | ¶ | &#182; | ¶ | pilcrow sign = paragraph sign |
| &permil; | ‰ | &#8240; | ‰ | per mille sign |
| &prime; | ′ | &#8242; | ′ | prime = minutes = feet |
| &Prime; | ″ | &#8243; | ″ | double prime = seconds = inches |
| &real; | ℜ | &#8476; | ℜ | blackletter capital R = real part symbol |
| &reg; | ® | &#174; | ® | registered sign = registered trade mark sign |
| &rlm; | ‏ | &#8207; | ‏ | right-to-left mark (for formatting only) |
| &sect; | § | &#167; | § | section sign |
| &shy; |  | &#173; |  | soft hyphen = discretionary hyphen (displays incorrectly on Mac) |
| &sup1; | ¹ | &#185; | ¹ | superscript one = superscript digit one |
| &trade; | ™ | &#8482; | ™ | trade mark sign |
| &weierp; | ℘ | &#8472; | ℘ | script capital P = power set = Weierstrass p |
|  | | | | |
| &bdquo; | „ | &#8222; | „ | double low-9 quotation mark |
| &laquo; | « | &#171; | « | left-pointing double angle quotation mark = left pointing guillemet |
| &ldquo; | “ | &#8220; | “ | left double quotation mark |
| &lsaquo; | ‹ | &#8249; | ‹ | single left-pointing angle quotation mark [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#lsaquo) |
| &lsquo; | ‘ | &#8216; | ‘ | left single quotation mark |
| &raquo; | » | &#187; | » | right-pointing double angle quotation mark = right pointing guillemet |
| &rdquo; | ” | &#8221; | ” | right double quotation mark |
| &rsaquo; | › | &#8250; | › | single right-pointing angle quotation mark [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#rsaquo) |
| &rsquo; | ’ | &#8217; | ’ | right single quotation mark |
| &sbquo; | ‚ | &#8218; | ‚ | single low-9 quotation mark |
|  | | | | |
| &emsp; |  | &#8195; |  | em space |
| &ensp; |  | &#8194; |  | en space |
| &nbsp; |  | &#160; |  | no-break space = non-breaking space |
| &thinsp; |  | &#8201; |  | thin space |
| &zwj; | ‍ | &#8205; | ‍ | zero width joiner |
| &zwnj; | ‌ | &#8204; | ‌ | zero width non-joiner |

**Entities for mathematical and technical characters (including Greek)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Entity** | **Entity Displayed** | **Number** | **Number Displayed** | **Description** |
| &deg; | ° | &#176; | ° | degree sign |
| &divide; | ÷ | &#247; | ÷ | division sign |
| &frac12; | ½ | &#189; | ½ | vulgar fraction one half = fraction one half |
| &frac14; | ¼ | &#188; | ¼ | vulgar fraction one quarter = fraction one quarter |
| &frac34; | ¾ | &#190; | ¾ | vulgar fraction three quarters = fraction three quarters |
| &ge; | ≥ | &#8805; | ≥ | greater-than or equal to |
| &le; | ≤ | &#8804; | ≤ | less-than or equal to |
| &minus; | − | &#8722; | − | minus sign |
| &sup2; | ² | &#178; | ² | superscript two = superscript digit two = squared |
| &sup3; | ³ | &#179; | ³ | superscript three = superscript digit three = cubed |
| &times; | × | &#215; | × | multiplication sign |
|  | | | | |
| &alefsym; | ℵ | &#8501; | ℵ | alef symbol = first transfinite cardinal [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#alefsym) |
| &and; | ∧ | &#8743; | ∧ | logical and = wedge |
| &ang; | ∠ | &#8736; | ∠ | angle |
| &asymp; | ≈ | &#8776; | ≈ | almost equal to = asymptotic to |
| &cap; | ∩ | &#8745; | ∩ | intersection = cap |
| &cong; | ≅ | &#8773; | ≅ | approximately equal to |
| &cup; | ∪ | &#8746; | ∪ | union = cup |
| &empty; | ∅ | &#8709; | ∅ | empty set = null set = diameter |
| &equiv; | ≡ | &#8801; | ≡ | identical to |
| &exist; | ∃ | &#8707; | ∃ | there exists |
| &fnof; | ƒ | &#402; | ƒ | latin small f with hook = function = florin |
| &forall; | ∀ | &#8704; | ∀ | for all |
| &infin; | ∞ | &#8734; | ∞ | infinity |
| &int; | ∫ | &#8747; | ∫ | integral |
| &isin; | ∈ | &#8712; | ∈ | element of |
| &lang; | ⟨ | &#9001; | 〈 | left-pointing angle bracket = bra [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#lang) |
| &lceil; | ⌈ | &#8968; | ⌈ | left ceiling = apl upstile |
| &lfloor; | ⌊ | &#8970; | ⌊ | left floor = apl downstile |
| &lowast; | ∗ | &#8727; | ∗ | asterisk operator |
| &micro; | µ | &#181; | µ | micro sign |
| &nabla; | ∇ | &#8711; | ∇ | nabla = backward difference |
| &ne; | ≠ | &#8800; | ≠ | not equal to |
| &ni; | ∋ | &#8715; | ∋ | contains as member [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#ni) |
| &notin; | ∉ | &#8713; | ∉ | not an element of |
| &nsub; | ⊄ | &#8836; | ⊄ | not a subset of |
| &oplus; | ⊕ | &#8853; | ⊕ | circled plus = direct sum |
| &or; | ∨ | &#8744; | ∨ | logical or = vee |
| &otimes; | ⊗ | &#8855; | ⊗ | circled times = vector product |
| &part; | ∂ | &#8706; | ∂ | partial differential |
| &perp; | ⊥ | &#8869; | ⊥ | up tack = orthogonal to = perpendicular |
| &plusmn; | ± | &#177; | ± | plus-minus sign = plus-or-minus sign |
| &prod; | ∏ | &#8719; | ∏ | n-ary product = product sign [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#prod) |
| &prop; | ∝ | &#8733; | ∝ | proportional to |
| &radic; | √ | &#8730; | √ | square root = radical sign |
| &rang; | ⟩ | &#9002; | 〉 | right-pointing angle bracket = ket [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#rang) |
| &rceil; | ⌉ | &#8969; | ⌉ | right ceiling |
| &rfloor; | ⌋ | &#8971; | ⌋ | right floor |
| &sdot; | ⋅ | &#8901; | ⋅ | dot operator [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#sdot) |
| &sim; | ∼ | &#8764; | ∼ | tilde operator = varies with = similar to [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#sim) |
| &sub; | ⊂ | &#8834; | ⊂ | subset of |
| &sube; | ⊆ | &#8838; | ⊆ | subset of or equal to |
| &sum; | ∑ | &#8721; | ∑ | n-ary sumation [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#sum) |
| &sup; | ⊃ | &#8835; | ⊃ | superset of [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#sup) |
| &supe; | ⊇ | &#8839; | ⊇ | superset of or equal to |
| &there4; | ∴ | &#8756; | ∴ | therefore |
|  | | | | |
| &Alpha; | Α | &#913; | Α | greek capital letter alpha |
| &alpha; | α | &#945; | α | greek small letter alpha |
| &Beta; | Β | &#914; | Β | greek capital letter beta |
| &beta; | β | &#946; | β | greek small letter beta |
| &Chi; | Χ | &#935; | Χ | greek capital letter chi |
| &chi; | χ | &#967; | χ | greek small letter chi |
| &Delta; | Δ | &#916; | Δ | greek capital letter delta |
| &delta; | δ | &#948; | δ | greek small letter delta |
| &Epsilon; | Ε | &#917; | Ε | greek capital letter epsilon |
| &epsilon; | ε | &#949; | ε | greek small letter epsilon |
| &Eta; | Η | &#919; | Η | greek capital letter eta |
| &eta; | η | &#951; | η | greek small letter eta |
| &Gamma; | Γ | &#915; | Γ | greek capital letter gamma |
| &gamma; | γ | &#947; | γ | greek small letter gamma |
| &Iota; | Ι | &#921; | Ι | greek capital letter iota |
| &iota; | ι | &#953; | ι | greek small letter iota |
| &Kappa; | Κ | &#922; | Κ | greek capital letter kappa |
| &kappa; | κ | &#954; | κ | greek small letter kappa |
| &Lambda; | Λ | &#923; | Λ | greek capital letter lambda |
| &lambda; | λ | &#955; | λ | greek small letter lambda |
| &Mu; | Μ | &#924; | Μ | greek capital letter mu |
| &mu; | μ | &#956; | μ | greek small letter mu |
| &Nu; | Ν | &#925; | Ν | greek capital letter nu |
| &nu; | ν | &#957; | ν | greek small letter nu |
| &Omega; | Ω | &#937; | Ω | greek capital letter omega |
| &omega; | ω | &#969; | ω | greek small letter omega |
| &Omicron; | Ο | &#927; | Ο | greek capital letter omicron |
| &omicron; | ο | &#959; | ο | greek small letter omicron |
| &Phi; | Φ | &#934; | Φ | greek capital letter phi |
| &phi; | φ | &#966; | φ | greek small letter phi |
| &Pi; | Π | &#928; | Π | greek capital letter pi |
| &pi; | π | &#960; | π | greek small letter pi |
| &piv; | ϖ | &#982; | ϖ | greek pi symbol |
| &Psi; | Ψ | &#936; | Ψ | greek capital letter psi |
| &psi; | ψ | &#968; | ψ | greek small letter psi |
| &Rho; | Ρ | &#929; | Ρ | greek capital letter rho |
| &rho; | ρ | &#961; | ρ | greek small letter rho |
| &Sigma; | Σ | &#931; | Σ | greek capital letter sigma |
| &sigma; | σ | &#963; | σ | greek small letter sigma |
| &sigmaf; | ς | &#962; | ς | greek small letter final sigma [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#sigmaf) |
| &Tau; | Τ | &#932; | Τ | greek capital letter tau |
| &tau; | τ | &#964; | τ | greek small letter tau |
| &Theta; | Θ | &#920; | Θ | greek capital letter theta |
| &theta; | θ | &#952; | θ | greek small letter theta |
| &thetasym; | ϑ | &#977; | ϑ | greek small letter theta symbol |
| &upsih; | ϒ | &#978; | ϒ | greek upsilon with hook symbol |
| &Upsilon; | Υ | &#933; | Υ | greek capital letter upsilon |
| &upsilon; | υ | &#965; | υ | greek small letter upsilon |
| &Xi; | Ξ | &#926; | Ξ | greek capital letter xi |
| &xi; | ξ | &#958; | ξ | greek small letter xi |
| &Zeta; | Ζ | &#918; | Ζ | greek capital letter zeta |
| &zeta; | ζ | &#950; | ζ | greek small letter zeta |

**Entities for shapes and arrows**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Entity** | **Entity Displayed** | **Number** | **Number Displayed** | **Description** |
| &crarr; | ↵ | &#8629; | ↵ | downwards arrow with corner leftwards = carriage return |
| &darr; | ↓ | &#8595; | ↓ | downwards arrow |
| &dArr; | ⇓ | &#8659; | ⇓ | downwards double arrow |
| &harr; | ↔ | &#8596; | ↔ | left right arrow |
| &hArr; | ⇔ | &#8660; | ⇔ | left right double arrow |
| &larr; | ← | &#8592; | ← | leftwards arrow |
| &lArr; | ⇐ | &#8656; | ⇐ | leftwards double arrow [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#lArr) |
| &rarr; | → | &#8594; | → | rightwards arrow |
| &rArr; | ⇒ | &#8658; | ⇒ | rightwards double arrow [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#rArr) |
| &uarr; | ↑ | &#8593; | ↑ | upwards arrow |
| &uArr; | ⇑ | &#8657; | ⇑ | upwards double arrow |
|  | | | | |
| &clubs; | ♣ | &#9827; | ♣ | black club suit = shamrock |
| &diams; | ♦ | &#9830; | ♦ | black diamond suit |
| &hearts; | ♥ | &#9829; | ♥ | black heart suit = valentine |
| &spades; | ♠ | &#9824; | ♠ | black spade suit [(note)](http://www.elizabethcastro.com/html/extras/entitynotes.html#spades) |
|  | | | | |
| &loz; | ◊ | &#9674; | ◊ | lozenge |