A Reference: Codes for Representing Greek Symbols

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Abstract

Computer scientists frequently use Greek symbols for representing variables, and specific constants. Computer science did not, however, see fit to include Greek symbols in the basic ASCII table of characters, nor did it provide keyboard buttons for them, nor has a consistent means of representing them been adopted. As we tend to store things like character encoding in already over-taxed short-term memory, a handy reference is provided here with several encoding standards side-by-side.

1   Considerations

As symbolic glyphs, there is a formal rendering style for each Greek character, which usually differs from the rendering of Greek letters used for the Greek language. This may influence font selection. For example; the OpenType font format has a `mgrk` tag to explicitly indicate Greek symbols to be used for mathematic representation.

The American Mathematical Society produced LaTeX packages to improve the functionality. In particular, `amsmath`, and `amssymb`, which contains lower-case Greek characters. LaTeX does not have macros for Greek glyphs that are almost identical to the Latin; upper-case Alpha and Beta, for example. These are not commonly used in formulae for this reason.

Unicode has several sets of Greek characters; Greek, Coptic, "Latin", functional symbols, mathematical bold, mathematical italic, mathematical bold-italic, and mathematical sans. You'll need to pick a set. I just give the one that is most-often used in JavaScript. The values here are in hexadeimcal notation. Note that HTML has the same macros as LaTeX, except in the HTML code style; `&#alpha`.

2   Table of Greek Character Codes

Lower,	Upper	Name	LaTeX	Unicode (hex)
α	A	Alpha	`\alpha, A`	03B1, 0391
β	B	Beta	`\beta, B`	03B2, 0392
γ	Γ	Gamma	`\gamma, \Gamma`	03B3, 0393
δ	Δ	Delta	`\delta, \Delta`	03B4, 0394
ϵ, ε	E	Epsilon	`\epsilon, \varepsilon, E`	03B5, 0395
ζ	Z	Zeta	`\zeta, Z`	03B6, 0396
η	H	Eta	`\eta, H`	03B7, 0397
θ, ϑ	Θ	Theta	`\theta, \vartheta, \Theta`	03B8, 0398
γ	I	Iota	`\gamma, I`	03B9, 0399
κ	K	Kappa	`\kappa, K`	03BA, 039A
λ	Λ	Lambda	`\lambda, \Lambda`	03BB, 039B
μ	M	Mu	`\mu, M`	03BC, 039C
ν	N	Nu	`\nu, N`	03BD, 039D
ξ	Ξ	Xi	`\xi, \Xi`	03BE, 039E
o	O	Omicron	`o, O`	03BF, 039F
π, ϖ	Π	Pi	`\pi, \varpi, \Pi`	03C0, 03A0
ρ, ϱ	P	Rho	`\rho, \varrho, P`	03C1, 03A1
σ, ς	Σ	Sigma	`\sigma, \varsigma, \Sigma`	03C2, 03A3
τ	T	Tau	`\tau, T`	03C4, 03A4
υ	Υ	Upsilon	`\upsilon, \Upsilon`	03C5, 03A5
ϕ	Φ	Phi	`\phi, \Phi`	03C6, 03A6
χ	X	Chi	`\chi, X`	03C7, 03A7
ψ	Ψ	Psi	`\psi, \Psi`	03C8, 03A8
ω	Ω	Omega	`\omega, \Omega`	03C9, 03A9
F	F	Digamma	`\digamma, F`	03DD, 03DC