

# In-Class Assignment 4

## Searching

Wednesday, January 23, 2008

### Regular Expressions (Answers)

1. What do the following regular expressions match?

- (a) `/m(a|e|i|o|u)d/`  
mad, med, mid, mod, mud
- (b) `/m(a|e|i|o|u)d?/`  
ma, me, mi, mo, mu, mad, med, mid, mod, mud
- (c) `/m(a|e|i|o|u)?d/`  
md, mad, med, mid, mod, mud
- (d) `/qwer*ty/`  
qwety, qwerty, qwerrty, qwerrrty, ...
- (e) `/qw(er)*ty/`  
qwty, qwerty, qwererty, qwerererty, ...
- (f) `/qw(er)+ty/`  
qwerty, qwererty, qwerererty, qwererererty, ...
- (g) `/qwer.ty/`  
qwer4ty, qweraty, qwer!ty, ... , qwerzty (*every possible character*)
- (h) `/qwer.*ty/`  
qwer4ty, qwer45ty, qwerGY?ty, qwerany-long-stringty, ...
- (i) `/qwe(r)*ty/`  
qwety, qwer4ty, qwer6rity, qwerrrpr0ty, ...

2. Write regular expressions which match the following lists of strings:

- (a) cabin, kabin  
`/[ck]abin/`

(b) cabin, kabin, cabins, kabins  
/[ck]abins?/

(c) cabin, kabin, cababin, kababin, cabababin, kabababin, ...  
/[ck](ab)+in/

(d) a, as, asd, asf, asdf, ad, adf, af  
/as?d?f?/