# Programming Languages HW # 2

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1. (a) (0*10*(0*10*10*)*|(0|1)*000(0|1)*)

   (b) consonant = [b-d|f-h|j-n|p-t|v-z]
   consonant* a [consonant|a]* e [consonant|e]* i [consonant|i]* o [consonant|o]* u [consonant|u]*

   (c) ((//)[.]*(\n)|(/*)[.]*(*/))
   Note: "." is the symbol for any character

2. (a)



   (b)



   (c)

3. (a) start → S1 —l→ S2 —d→ S3 —ε→ S4

S4 —ε→ S5 —l→ S6 —ε→ S9

S4 —ε→ S7 —d→ S8 —ε→ S9

S9 —ε→ S4

S9 —ε→ S10

S3 —ε→ S10

S4 ← S9 (ε)

(b) start → S1 —l→ s2 —d→ s3 —l, d→ s4

s4 —l, d→ s4 (self loop)

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