Q1)
Total number of possible passwords:
one lower case letter: 26
one upper case letter: 26
two digits: 10^2
@ symbol: 1
two letters, each upper/lower case: 52^2
three symbols from {$, 9,5, v, w,J}:6^3

Hashed Password: Tiger($26 \times 26 \times 10^2 \times 1 \times 52^2 \times 6^3$)
Entropy of Hashed Password: $\text{Log}_2 N^L$

$$\text{Log}_2(\text{Tiger}(26 \times 26 \times 10^2 \times 1 \times 52^2 \times 6^3))$$

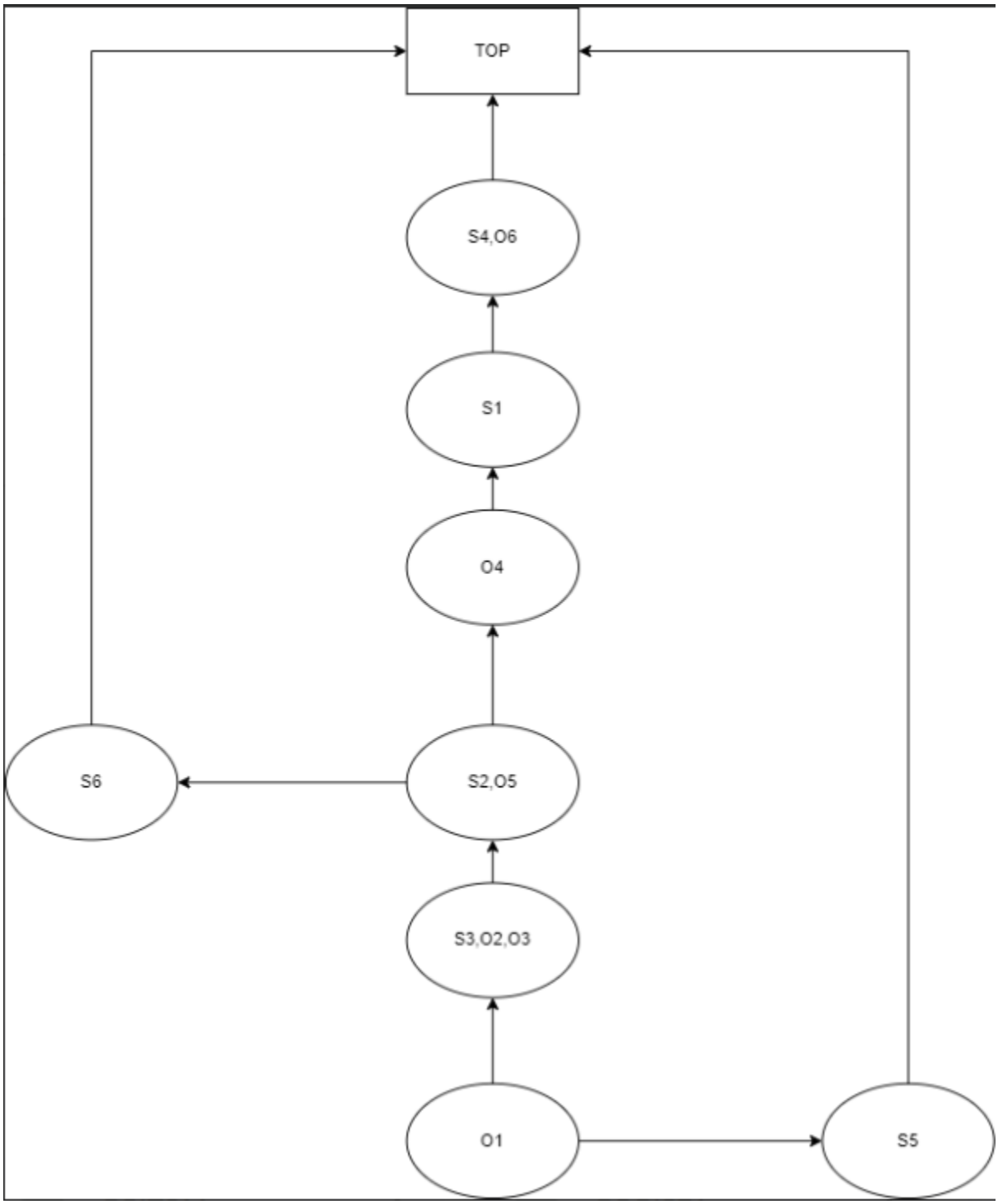
The hash function transforms the password into a different representation, but it does not increase the number of possible combinations(entropy) of the original password. The entropy of the hashed password is still limited by the original password's entropy, even though if the hashed password might look more complex or random. Therefore the strength and complexity still remains the same, unless the Hash function includes salting then the password strength might be increased after hashing.

Q2)

	O1	O2	O3	O4	O5	O6
S1	R	R	R	R	R	W
S2	R			W	RW	W
S3	R	RW	RW		W	W
S4	R			R		RW
S5	R					
S6	R	R	R		R	

- Subjects from every level can read objects O1 -> O1 are dominated by all subject. Hence O1 must be at the lowest point.
- Subject S5 can read only objects O1, hence subject S5 can only dominate object O1.
- Subject S3 can read and write object O2,O3, hence S3,O2,O3 must be at the same level
- Subject S2 can read and write object O5, hence S2,O5 must be at the same level
- Subject S1 can read all objects except for O6, hence S1 must dominate all objects except for O6.
- Subject S4 can read and write object O6, hence S4,O6 must be at the same level. S4 and O6 must dominate subjects S1, S2 and S3 in order to allow writing.
- Subject S6 can read only O1,O2,O3,O5, hence subject S6 can only dominate object O1,O2,O3,O5

- Object O4 doesnt have both Read and Write for subjects, so it is alone. Since S4 reads only O4 and dominates S1 which reads only O4, S1 will dominate O4. Since S2 writes only O4, O4 will dominate S2



Q3)

Subjects	Actions	Objects
Alice	climb,eat	trees,apples
Bob	climb,eat,wave	fences,apples,flags
Tree	hurt	apples
Carol	jump,wave	waves,flags

Access Control Matrix

First letter of each action is used as symbols

Subjects/Objects	Apples	Trees	Fences	Waves	Flags
Alice	e	c			
Bob	e		c	w	
Tree	h				
Carol				w	j