Lab 13

Part A

A	10
B	1111
C	1110
D	110
E	0

$Average = \frac{(2+4+4+3+1)}{5} = 2.8$

Part B

Delta compressions encode a target file with respect to one or more reference files, in such a way that s decoder/receiver who has access to these reference files is able to recreate the target file from the compressed data. This is usually used in cases where there is a high degree of redundancy between target and reference files, which will lead to a much smaller compressed size than could be achieved by just compressing the target file by itself.

A use case for delta compression is a revision control system and versioned file systems such as git that store many versions of a file or software or content updates over networks where the recipient already has an older version of the data. Wikipedia articles also tend to have a lot of redundant data after a lot of edits have been made to an article which means different versions will only alter slightly between each other.

Part C

A	0
B	1
C	2
D	4
BA	5
AB	6

BAA	7
ABA	8
AA	9

B = 1 [BA not in table]

A = 0 [BA not in table]

BA = 5 [BA no in table]

AB = 6 [BA not in table]

A = 0 [BA not in table]