

Assignment 2:

Computer Architecture

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1 Question 1:

A cache consists of 128 lines. The main memory contains 8192 blocks of 256 words each. Design the address format if the cache is

- (a) Direct Mapped
- (b) Associative Mapped
- (c) Set Associative with four-line per sets

1.1 Part A: Direct Mapped

For the direct mapped cache, we need to know three things:

- Required cache lines bit length: $\log_2(128) = 7$ bits
- Required word offset bit length: $\log_2(256) = 8$ bits

1.2 Part B: Associative Mapped

1.3 Part C: Set Associative with four-line per sets

2 Question 2:

TODO :D