Quiz 1: Ten minutes

1. Name one programming structure that typically features spatial and temporal locality and justify your choice.

2. For a 16-bit address space, identify the bits in an address that correspond to the *tag, set*, and *block offset* for a 2-way set associative cache that stores a total of 16 blocks. Each block contains 4 words.

Quiz 1: Ten minutes

1. Name one programming structure that typically *does not* feature spatial and temporal locality and justify your choice.

2. For a 16-bit address space, identify the bits in an address that correspond to the *tag, set*, and *block offset* for a 4-way set associative cache that stores a total of 8 blocks. Each block contains 2 words.

Quiz 1: Ten minutes

1. Describe trade-off that occurs if you were to *increase* a cache's block size while keeping the same *associativity* and *total capacity.*

2. For a 16-bit address space, identify the bits in an address that correspond to the *tag, set*, and *block offset* for a direct mapped cache that stores a total of 32 blocks. Each block contains 4 words.