Quiz-2

Name_____cayden dunn_____ Total = 10pts.

1. What are indexes? Give an example. [2 + 2 = 4pts]

    indexes in sql databases are data structures that improve the speed of data retrieval operations.
    They work similarly to an index in a book, allowing the database to find data without having to scan
    every row of a table.
    here is an example of using an index
    CREATE INDEX idx_users_email
    ON users (email);

2. What is a page? Give an example. [2 + 2 = 4pts]
    Pages also known as blocks are the smallest atomic units that are actually written to a hard disk.
    Block size can be specified and usually there is some sort of configuration on the hardware that
    creates some form or redundancy of the blocks or entire files stored.
    And example of a block is kinda the same as indexing if you request a certain table of a certain row
    the database does not need to fetch the entire table it will just pull the block the contains the given
    row and then grad the contents it needs from the block

3. What is a bucket? Give an example [1 + 1 = 2pts]
    Buckets are places where data is stored. Usually a buckets work in tandem with some form of a
    hash function that determines which bucket the data will be stored in.
    An example of this is a bucketed index in a database where each bucket will contain a list of values
    and their corresponding pointers to the actual data. Upon look up of a value in the index, the
    database uses the hash function to determine which bucket to look in. finally it scans through that
    bucket to find the value.