**Class Exercise – 11.2**

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**Submission**: Save this Word document with your answers as a PDF file and upload the PDF file to Canvas.

**Query Optimization**

**Using the following query:**

**SELECT EMP\_LNAME, EMP\_FNAME, EMP\_DOB, YEAR(EMP\_DOB) AS YEAR**

**FROM EMPLOYEE**

**WHERE YEAR(EMP\_DOB) = 1966;**

1. **What is the likely data sparsity of the EMP\_DOB column?**

High

1. **Should you create an index on EMP\_DOB? Why or why not?**

No, because the query uses the YEAR function. It would not help the query.

1. **What type of database I/O operations will likely be used by the query?**

The query will use a full table scan because there is no index that is unique for this query.