

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

2. 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.

3. 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.