# IST769 Homework Submission Template

## Basic Information

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Date Due: February 19, 2020

Homework #: HW04

## Instructions

For each answer, please include your answer as text, and any screenshot(s) which demonstrate your answer was executed. Most importantly, make sure to include evidence your answer is correct. This will most likely be a screenshot. If you had issues, problems, or had to make assumptions include them in your answer.

## Your Answers:

1. **Code:**

select \* into demo.dbo.timesheets

from fudgemart\_v3.dbo.fudgemart\_employees

join fudgemart\_v3.dbo.fudgemart\_employee\_timesheets

on employee\_id = timesheet\_employee\_id;

-- Question 1

CREATE index employee\_index

ON demo.dbo.timesheets(employee\_lastname)

INCLUDE (employee\_firstname, employee\_id, timesheet\_hourlyrate, timesheet\_hours)

SELECT employee\_id, employee\_firstname, employee\_lastname,

SUM(timesheet\_hourlyrate \* timesheet\_hours)

FROM demo.dbo.timesheets

GROUP BY employee\_id, employee\_firstname, employee\_lastname;

**Results:**

**A screenshot of a cell phone

Description automatically generated**

**A screenshot of a social media post

Description automatically generated**

1. **Code:**

SELECT employee\_id, employee\_firstname, employee\_lastname, SUM(timesheet\_hourlyrate \* timesheet\_hours)

FROM demo.dbo.timesheets

GROUP BY employee\_id, employee\_firstname, employee\_lastname

HAVING employee\_lastname = 'Choke';

**Results:**

**A screenshot of a social media post

Description automatically generated**

1. **Code:**

CREATE NONCLUSTERED COLUMNSTORE INDEX columnindex\_employee

ON demo.dbo.timesheets(employee\_department, employee\_jobtitle, timesheet\_hours, timesheet\_hourlyrate)

WITH (DROP\_EXISTING = ON);

SELECT employee\_department, SUM(timesheet\_hours)

FROM demo.dbo.timesheets

GROUP BY employee\_department;

SELECT employee\_jobtitle, SUM(timesheet\_hourlyrate)

FROM demo.dbo.timesheets

GROUP BY employee\_jobtitle;

**Results:**

**A screenshot of a cell phone

Description automatically generated**

1. **Code:**

-- creating view table

IF EXISTS (select \* from sys.objects WHERE name = 'v\_employees')

DROP VIEW v\_employees

GO

CREATE VIEW v\_employees WITH SCHEMABINDING

AS

SELECT employee\_id, employee\_firstname, employee\_lastname, employee\_jobtitle, employee\_department, COUNT\_BIG(\*) AS 'Count'

FROM dbo.timesheets

GROUP BY employee\_id, employee\_firstname, employee\_lastname, employee\_jobtitle, employee\_department;

GO

-- create index based on view

CREATE UNIQUE CLUSTERED INDEX ind\_v\_employees

ON v\_employees(employee\_id, employee\_firstname, employee\_lastname, employee\_jobtitle, employee\_department)

WITH (DROP\_EXISTING = ON);

GO

-- check for scan type

select employee\_id, employee\_firstname, employee\_lastname, employee\_jobtitle, employee\_department

FROM v\_employees

**Results:**

**A screenshot of a social media post

Description automatically generated**

1. **Code:**

SELECT DISTINCT employee\_id, employee\_firstname, employee\_lastname,

COUNT(employee\_id) as 'COUNT',

SUM(timesheet\_hours) AS 'SUM',

AVG(timesheet\_hourlyrate) AS 'AVG'

FROM demo.dbo.timesheets

GROUP BY employee\_id, employee\_firstname, employee\_lastname

FOR JSON AUTO

**Results:**

**A screenshot of a cell phone

Description automatically generated**

**JASON Type Query:**

**A screenshot of text

Description automatically generated**

## Student Reflection:

To achieve the highest grade on the assignment you must be as descriptive and personal as possible with your reflection. Ask yourself the following questions.

1. What new information have I learned from completing this assignment?

Creating Index to improve performance.

Security and Permission.

Converting data type to JASON type.

1. What were my challenges / roadblocks I encountered on the way to completing it?

Different types of index which require different conditions when creating those indexes

1. To be better prepared to attempt this assignment I should \_\_\_\_\_\_\_ ?

Google!

1. If I could make this assignment better, I would \_\_\_\_\_?

Pay attention in the lecture

1. Rate your comfort level with completing this assignment:

3 -> Professor Fudge

1 ==> I can do this on my own and explain how to do it.

2 ==> I can do this on my own without any help.

3 ==> I can do this with help or guidance from others. If you choose this level, please list those who helped you.

4 ==> I don't understand this at all yet and need extra help. If you choose this, please try to articulate that which you do not understand.