The University of Texas at Austin
McCombs School of Business

MIS 381N – INTRO. TO DATABASE MANAGEMENT

Course Overview / Introductions

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AGENDA

Introductions	Myself, each other To the course
Materials Needed	Book Computer
Syllabus	Exams, assignments Participation

INTRODUCTIONS

To myself and the course

WHO AM I?

- Dr. Tayfun Keskin (pronounced like Typhoon) is an Associate Teaching Professor at the University of Washington Seattle.
- He holds a Ph.D. degree from The University of Texas at Austin, McCombs School of Business.
- Taught several undergraduate and graduate courses at the University of Washington and The University of Texas.
  - see www.drkeskin.com for more information

A LITTLE BACKGROUND

- Industry Experience?
  - P&G (process engineer)
  - Oracle (project manager)
  - Kraft Foods (marketing)
- Education?
  - B.Sc. Electrical and Electronics Engineering
  - MBA, M.Sc. in Management Information Systems
  - Ph.D. in Information Systems

WHERE FROM?

TELL ME ABOUT YOURSELVES

- Name
- Something interesting / unique about you
- Any other information you'd like to share

PURPOSE OF THIS CLASS

- The important role data plays within an organization in today's digital world
- How to design and model a traditional relational database
- How to query, analyze, and manipulate data in a database using SQL
- Understand the evolution and use of database technologies beyond SQL
- Understand concepts behind building data warehouse and big data
- Gain working knowledge in Big Data storage processing (MapReduce, Hadoop, and Spark)

WELCOME TO DATABASE MANAGEMENT

- In this class we'll learn to appreciate designing, building, and using databases
- We'll also learn how to deal with "big data"
- This content is key to understanding critical information if you want to stay in this industry
- My goal is to get you excited about data

TWO RELATED SECTIONS

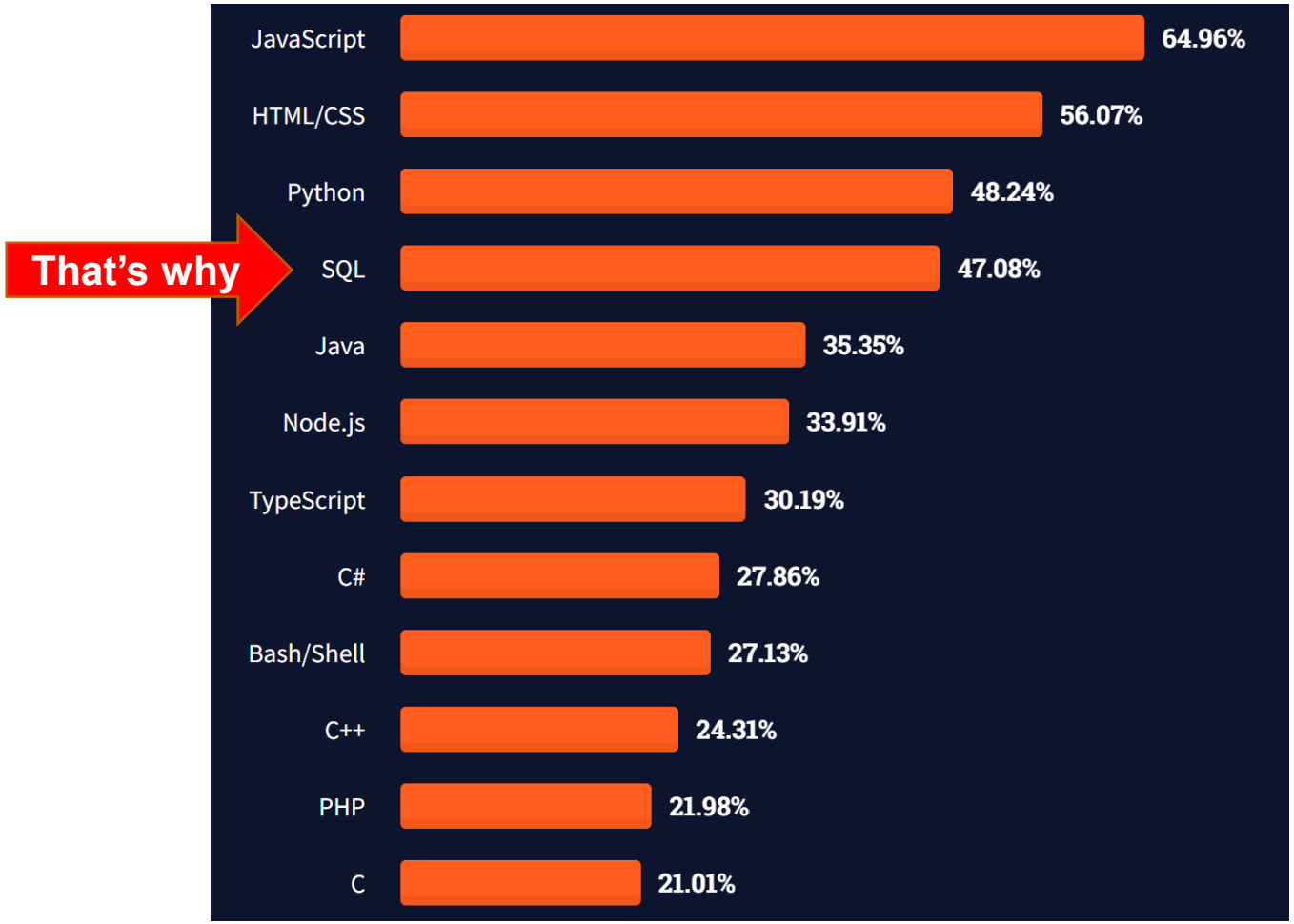
Traditional RDBMS

- Design and manipulation of traditional databases (including SQL)
- Design and development of data warehouse

Big Data Techniques

- Understand Big Data storage processing (Map Reduce, Hadoop, Hive, Pig, Spark)
- Evaluate Big Data ecosystem and analytics

WHY THOUGH?



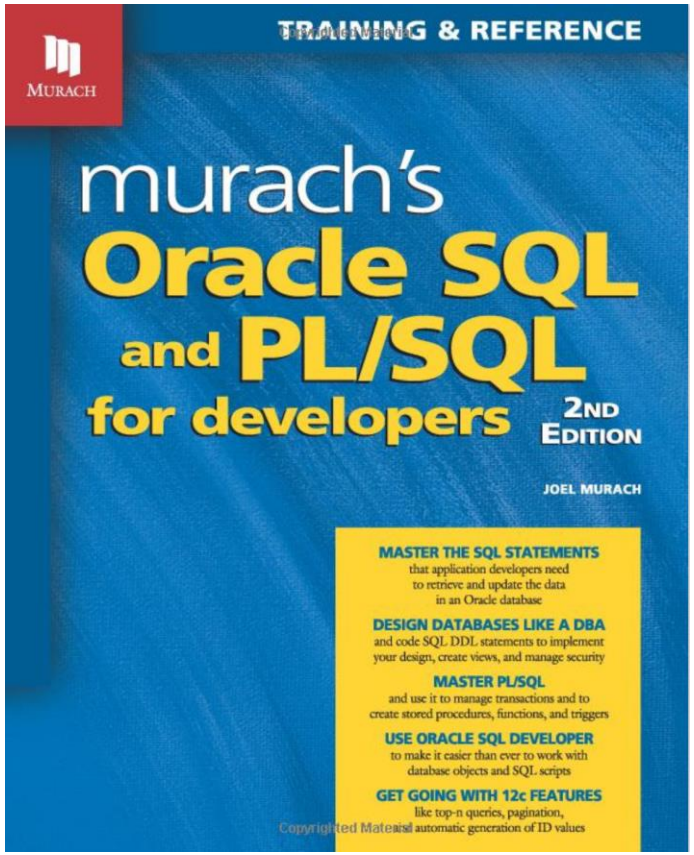
https://insights.stackoverflow.com/survey/2021#technology

MATERIALS NEEDED

Such as the book, a computer, and software

BOOK

- Title: Murach's Oracle SQL and PL/SQL for Developers (2nd Edition)
- Author: Joel Murach
- Publisher: Mike Murach & Associates
- ISBN-13: 978-1890774806



COMPUTER

- A personal computer is needed for this course
- See the syllabus for required software
- High-speed network connection
- Computer webcam, microphone and speakers
- Zoom requirements: https://support.zoom.us/hc/en-us/articles/201362023-System-requirements-for-Windows-macOS-and-Linux

SYLLABUS

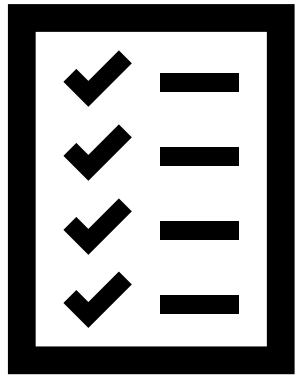
Only the important stuff

GRADING

1. Exams	30%
2. Assignments	30%
3. Project	30%
4. Participation and Quizzes....	10%
Total:	100%

EXAMS

- Three exams
- In-class
- Not cumulative



- Extenuating circumstances? Let me know a.s.a.p.

ASSIGNMENTS

- 8 assignments
- Individual (unless stated otherwise)
- Online: submit on Canvas

GROUP PROJECT

- Teams should be 4 to 6 students each
- Detailed requirements about the project will be communicated on Canvas
- The project will be presented (in class) the week after Thanksgiving

PARTICIPATION AND QUIZZES

- I will not take attendance (but you'll learn better if you follow the class daily)
- There might be quizzes
- Answer questions and have your questions answered
- Talking (rambling, a single word) is not participation
- See the syllabus for more information

COMMUNICATION

- I typically teach multiple sections and get a lot of emails
- Direct communication at the end of class is better (faster and richer) than email in most circumstances
- If you decide to write me an email:
  - Start with a clear subject line
  - Include your course name, section, and your full name
  - Use professional language and keep it concise

OFFICE HOURS

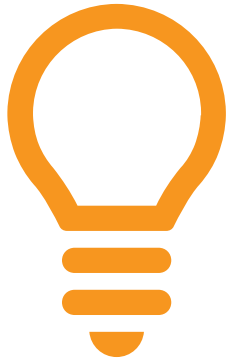
- I am continuously trying figure out the best way to spend quality time with my students
- If you want to meet, please send an email to me (or your TA) and let us know when:
  - I typically reply with an outlook appointment including a zoom link
  - If more students request to meet during the same office hour, I might change the duration (time interval) of the appointments to accommodate everyone

SCHEDULE

Class #	Day	Date	Topic
1	W	25-Aug	Course Overview Introduction
2	M	30-Aug	Data-Business-Strategy Alignment
3	W	1-Sep	Client/server architecture & Conceptual design: Entity-Relationship Modelin
-	M	6-Sep	Labor Day - No Class
4	W	8-Sep	Logical Design: Detailed Models and Normalization
5	M	13-Sep	Physical Design: DDL Create Tables & DDL Script
6	W	15-Sep	Advanced Design: Indexes & Sequences
7	M	20-Sep	SQL Essentials Review: DML *(online/remote)*
8	W	22-Sep	SQL Essentials Review: More complex queries *(online/remote)*
9	M	27-Sep	Advanced SQL: Summary Queries
10	W	29-Sep	Advanced SQL: How to Code Subqueries
11	M	4-Oct	Issues with Relational Model, ETL, Data Warehouse design
12	W	6-Oct	OLAP, ROLAP, Data Analytics, Data Warehousing
13	M	11-Oct	**Exam 1**
14	W	13-Oct	Data Governance
15	M	18-Oct	Enterprise Data Architecture
16	W	20-Oct	Big Data Introduction
17	M	25-Oct	MapReduce Introduction
18	W	27-Oct	Applications of MapReduce
19	M	1-Nov	Applications of MapReduce
20	W	3-Nov	Spark Introduction, RDDs
21	M	8-Nov	Spark - Datasets and data frames
22	W	10-Nov	Hands-on programming using Databricks, PySpark, SQL
23	M	15-Nov	Hands-on programming using Databricks, PySpark, SQL
24	W	17-Nov	**Exam 2**
25	M	22-Nov	Project Discussion
-	W	24-Nov	Thanksgiving holiday
26	M	29-Nov	Final Project Presentations
27	W	1-Dec	Final Project Presentations
28	M	6-Dec	Last day: Course wrap-up, reflections, evaluations

COURSE QUESTIONS

Do you have any questions?



Do you have an idea / recommendation?

LOOKING FORWARD

- Check Canvas… regularly
- Read the article “What’s Your Data Strategy?” by DalleMule and Davenport
- Post one question on the discussion board. Post can be a new post or a (thoughtful) reply to a classmate’s post

THANK YOU