

CSCI 6333/6315 Database Systems

**Spring 2019
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Project Assignment Part B

HomeNeedsService.com

An Online Marketplace for Arranging or Offering Home Needs Service.

Database Design, 100 points

Due: Midnight, Tuesday, February 25, 2020

Part 1. Database Design

Stories

Joe is an experienced, independent plumber living in Edinburg, TX. He does not have enough clients and wants to find more. Joe can travel within 50 miles around his home. However, there aren't easy ways available help Joe.

Jane lives in McAllen, TX and is good at home cleaning. She has 4 stable clients to fill in 4 hours a day for 4 days a week. She wants to find 4 or more homes to clean so that she can earn more income per week. She is flexible with her schedule but cannot travel too far. She does not know where to find new clients.

Mike owns a small electric service business in Brownsville, TX and is excellent at cooling and heating as well as home electric appliance service. Although he has enough clients during the hottest season of a year, but most of times his work schedule is far from full. He also needs to find more jobs.

There are many people like Joe, Jane and Mike living in the Valley and other parts of the world who need to find more home service jobs, but there aren't easy ways for them to find.

On the other side of the above stories, Paul just noticed that there is some water dripping from his living room ceiling last Saturday morning. He was desperately needing some reliable plumber to solve his water dripping problem. He had no way of finding someone who was trustable, not overrated, but willing to come quickly to help him.

Kassie just had a new baby and badly needs someone to come to her home for cleaning twice a week. She is afraid of calling some random person to come to her home. She needs some way to find a caregiver who is not only good at the job but also trustable and reliable.

Joey owns a set of rental properties and he does have one reliable AC helper to serve his needs. However, in months of July, August and September, Joey's AC helper often gets so tied up and cannot help Joey in hours or one or two days. Calling someone for emergent AC care often means paying a much higher rate, so Joey needs to find someone like Mike who is available and does not ask for extra pay.

There are so many folks like Paul, Kassie and Joey living in the Valley and other parts of the world who need to find reliable, trustable individuals who provides quality home needs service, but there aren't easy ways for them to find.

There is a missing link between the individuals like Joe, Jane and Mike who need jobs and can provide quality services, and the folks like Paul, Kassie and Joey in the Valley and other cities around the world, who need quality services. This project aims at building **HomeNeedsService.com** to connect this missing link so that folks like Joe, Jane and Mike can easily meet with folks like Paul, Kassie and Joey. **HomeNeedsService.com** will provide an online marketplace for arranging or offering home needs service. Folks like Joe, Jane and Mike can register with this web site and have their identities and background checked for security, trust and quality assurance. Clients like Paul, Kassie and Joey can also register with this web site and have their identities and background checked. Importantly, this web site can automate the job arrangements, payments and reviews between service providers and those who need service.

Examples

Presently, **handy.com** is a good example to start with for our project. This web site has the contents and coverage related this domain of our project. What it lacks is the ability to automate the arrangements between service providers like Joe, Jane and Mike and those who need service like Paul, Kassie and Joey.

Two good examples to follow for this project are **www.airbnb.com** and **www.uber.com** though these work for completely different domains from home needs service. I am sure that you can draw analogies between our project and the two successful web services. Those analogies shall help you to design solution to our project.

Requirements

I need you to submit a document consists of at least three parts:

- The problem statement, giving the description of the problem in detail.
- The E-R design, showing E-R design for solving your problem.

- Relational Database Design, presenting tables and the related information.

In case you may hit a wall, here is the [Technical Report of the ANTES System database design](http://faculty.utrgv.edu/zhixiang.chen/cs6333-6315/hw/ANTES-DB.pdf)(<http://faculty.utrgv.edu/zhixiang.chen/cs6333-6315/hw/ANTES-DB.pdf>), however, the E-R design is not included in this document. This document may give an example about how to prepare your document.

Part 2: How to Submit

On the cover page, the following items shall be included:

- Group number and group name
- Group captain
- Group member names and IDs

The group captain needs submit the documents of Part 1 to Blackboard.