Team 3:

Kyra Belgica
Jaehee Seh
Utibeabasi Obot
Hamilton Nguyen

CSE 3330 - Database Systems and File Structures
Professor Bhanu Jain
Teaching Assistants: Spardha Gupta and Dani Yash
The University of Texas at Arlington

Influences

From our researches, we've attained a lot of knowledge about trash, specifically textile waste. It was shocking to learn how much debris comes from textile in the United States alone. This made our group be more aware of making choices when it comes to clothes. For example, the next time we shop online, we'll be thinking twice before making careless purchases. Our team will also consider buying from resale stores or thrift stores, and look into recycling clothes to a textile recycling company or reusing scrap materials in creative ways.

Execution of RENIM Web application

1. In order to execute the implementations of the web application, please transfer the .php files , CSS and Picture folders to your htdocs folder in XAMPP directory in C://.
2. Turn on XAMPP control panel and start Apache Tomcat and MySQL. Then click admin buttons on Apache and MySQL.
3. Import the renim.sql file into your MariaDB type using phpmyadmin.
4. From a web browser, type in localhost/htdocs/index.php in the web address.
5. Then you should see the Home page of Renim with several tab queries.
6. Note: this execution is done only as a localhost.

Technologies Used

PHASE 1

The first part of Project Trash was mainly research and figuring out the implementations of our company. We mainly researched online to gather background information on the issues of waste. After we gathered sufficient information, we came up with the title, Renim, we also determine how Renim logistically operates and the services that Renim cam provide. We also account on how the company contributes to diminishing textile waste, how we are compared to other competitors and collaborators, the geographical area that our company is based in, its domain, and lastly, the impact on the environment. The research references can be found under the "References" section.

PHASE 2

In Phase 2, business planning, requirements analysis and requirement specifications were drafted and approved to develop a Web application for the company Renim. The Enhanced Entity Relation diagram explicitly describes entities and their attributes, relationships, and any other special requirements that are needed to design a MariaDB type database. The relational schema were also designed, drafted, and approved in support with the ER/EER model. Then, our group converted the model to a relational (tabular) schema using EER-to-relational mapping. For our ER/EER model, we used Creately, an online chart and diagram tool. For the relational schema diagram, we used Diagrams.net to map out the design.

PHASE 3

The last phase required our team to implement a web application for company Renim which consisted of MariaDB type database system (containing 7 tables, 1 view table), 13 php type scripts to handle client side and server query requests to the database, and two css files for web application layouts. Github was used as a centralized resource to store and share our web application's critical files such as php scripts, css sheets, data population pool in txt file formats, a back-up sql data file, and a Unit Test Folder. Our team utilized various software and hardware tools such as XAMPP, phpmyadmin, Notepad++, Google Chrome and Microsoft Edge web browser to successfully build the web application.

References

RESEARCH

- CalRecycle: https://www.calrecycle.ca.gov/reducewaste/textiles
- CalRecycle: https://www2.calrecycle.ca.gov/WasteCharacterization/PubExtracts/2014/ExecSummary.pdf
- Fast Company: https://www.fastcompany.com/90377960/hm-gap-and-tommy-hilfiger-are-pledging-to-clean-up-toxic-denim
- HuffPost: https://www.huffpost.com/entry/what-does-goodwill-do-with-your-clothes_n_57e06b96e4b0071a6e092352
- Levi's: https://www.levi.com/US/en_US/blog/article/how-every-one-of-us-can-fight-climate-change/?ab=values_topa2_climateactionsummit_clickheretolearnhow_091619
- ResearchGate: https://www.researchgate.net/publication/290296791_Processing_and_Characterization_of_Waste_Denim_Fiber_Reinforced_Polymer_Composites
- SAGE Publications: https://journals.sagepub.com/doi/full/10.1177/0040517519870317
- The Balance Small Business: https://www.thebalancesmb.com/textile-recycling-facts-and-figures-2878122
- WasteDive: https://www.wastedive.com/news/what-chinese-import-policies-mean-for-all-50-states/510751/