

Fundamentals of Database Systems – PROJECTS (Development)

PGDBA, First Year, 2020–2022

Deadline: February 15, 2021

Total: 10 marks

SUBMISSION INSTRUCTIONS

1. Deliver a solution sketch through team presentation on (or immediately after) the deadline. The presentation date is to be fixed later.
2. The presentation slides should contain the components (if applicable): Introduction, Related Work, Terminologies and Definitions, Theory, Methods, Results, Conclusion.

NOTE: The contribution must be novel and non-trivial.

Project 11: [**Medical Tourism**] Though medical tourism refers to traveling abroad to obtain medical treatment [1], there is an immense scope of offering local tours to patients in between their treatment schedule. This basically combines health tourism with normal tourism. Suppose having such a platform for this purpose.

Your task is to design and implement such a platform and enable interaction between the patients, hospitals, and tour operators. The interaction details should be stored in the database. The logins must be password protected.

[1] Suess, C., Baloglu, S. and Busser, J.A., 2018. Perceived impacts of medical tourism development on community wellbeing. *Tourism Management*, 69, pp.232-245. (Link: <https://fardapaper.ir/mohavaha/uploads/2020/08/Fardapaper-Perceived-impacts-of-medical-tourism.pdf>)

Project 12: [**Citizen Science**] Citizen science is a new approach of conducting scientific research by involving the general public. For example, Zooniverse is a citizen science platform that is powered by common people [1]. The Zooniverse enables everyone to take part in real cutting edge research in many fields across the sciences, humanities, and more. Planet Hunters is a citizen science project under Zooniverse that tries to discover new planets by employing common people as volunteers [2]. The volunteers observe how the brightness of a star changes over time and report the same.

You are required to design a citizen science platform (say CrowS: Crowd-driven Science) and suitably connect it to a database (one that suits the best here) so that it enables people-powered research. You are free to choose a scientific domain (say species discovery) for designing the platform. The logins for requesters and responders must be password protected and different.

[1] Zooniverse. (Link: <https://www.zooniverse.org>)

[2] First Validated PHT Planet!. (Link: <https://blog.planethunters.org>)

Project 13: [**Story Maker**] Collaborative creativity is the approach of employing a group of people to accomplish creative tasks by means of collective intelligence. Collective intelligence can be applied for performing creative tasks like story writing. This has recently emerged as a useful crowd-powered application. There are recent attempts that has proposed models towards this through linking images [1]. This is accomplished by connecting a series of ‘images’ reflecting successive scenarios, often termed as Image Chains, for writing stories. This provides an organized framework of story writing unlike most of the state-of-the-art collaborative editing platforms.

Design and develop such a platform, which deals with images and, to be built upon multi-media databases.

[1] Auroshikha Mandal, Mehul Agarwal, and Malay Bhattacharyya. “Collective Story Writing through Linking Images.” In Proceedings of the Sixth AAAI Conference on Human Computation and Crowdsourcing (HCOMP WiP), Zurich, Switzerland, July 5-8, 2018. (Link: <https://arxiv.org/pdf/1806.04298.pdf>)

Project 14: [**Fair Price Platform**] The prices of everyday commodities is so dynamic and populated (unethically by some people) that they vary place to place even within the same locality. Suppose you wish to provide the details of prices of commodities in your nearby market places through an application. There are two parties in this application - the information provider and the information explorer.

Design and implement such a mobile App that would locate your place and show the details of nearby market prices product by product. You have to use the SQLite database to be accessed by the App.

[1] SQLite. (Link: <https://www.sqlite.org/index.html>)

Project 15: [**Gossip Platform**] Gossip has an important role to play in many different environments [1]. Imagine having a platform for carrying out gossip between different groups of people. This is conceptually nothing but having a dynamic chatting environment for varying number of people. The target person (on whom the gossip is performed) is certainly not a part of the chatting environment.

Design and develop one such platform based on appropriate NoSQL database.

[1] Lee, S.H. and Barnes, C.M., 2020. An attributional process model of workplace gossip. Journal of Applied Psychology. (Link: <https://hmpdacc.org>)