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CMPT 220
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13 March 2020

Turtle Database

My plan for Project 2 is to design and program a Java application that a biologist or wildlife conservationist could use to keep track of turtles that they meet. The application will contain a database that the user writes to by entering information about a turtle into several fields and then submitting it as an entry. These data fields will encompass traits that make each turtle unique, including the species they belong to, their shell-top pattern, shell texture, skin color, height, weight, and geographic range. The user could even attach a picture of the turtle to the database entry to make it easier to recognize the turtle when they access the entry in the future. I do not yet know the details of how I will build this application since I do not have experience in database programming. However, a quick Google search reveals that there are dozens of great articles and videos that walk beginners through the processes involved in database programming, so I think that this project will be a good learning experience for me and an opportunity for me to get my feet wet before taking upper-level database courses. My application will also require me to work with Java forms in order to create its graphical user interface, but this part should not be as troublesome as making the database since I have made GUIs in my programming courses in the past. If I successfully implement the database and GUI, and time permits, then I would also like to add a search function in the application so that when there are so many entries that manually looking for a specific one becomes frustrating, the user can simply enter one or several traits to make finding the turtle entry that they are looking for significantly easier. My inspiration for this application stems from my fascination with turtles as well as the desire to help in both research and conservation efforts for endangered turtle species. Although there are probably already several programs that serve the same purpose as mine, going through the long process of building it will expand my knowledge in the fields of computer science and ecology, both of which I hope my career will incorporate.