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COMP 3000 Project Proposal

Description:

Create a chemical database to hold various information about chemicals such as safety information, common uses, official and common names, molecular weight, thermodynamic info etc. The program can allow the user to either fetch data for a chemical or add a profile to the database for a new chemical. The program can also make a report with all the information wanted. Users can use the program to quickly gather chemical information or to look at chemicals that fit into desired characteristics, such as phase at a certain temperature or solubility in water.

Functions:

fetchInfo() – can retrieve a given piece of information on a chemical of choice based on user input, provides hazard warnings if the chemical is unsafe

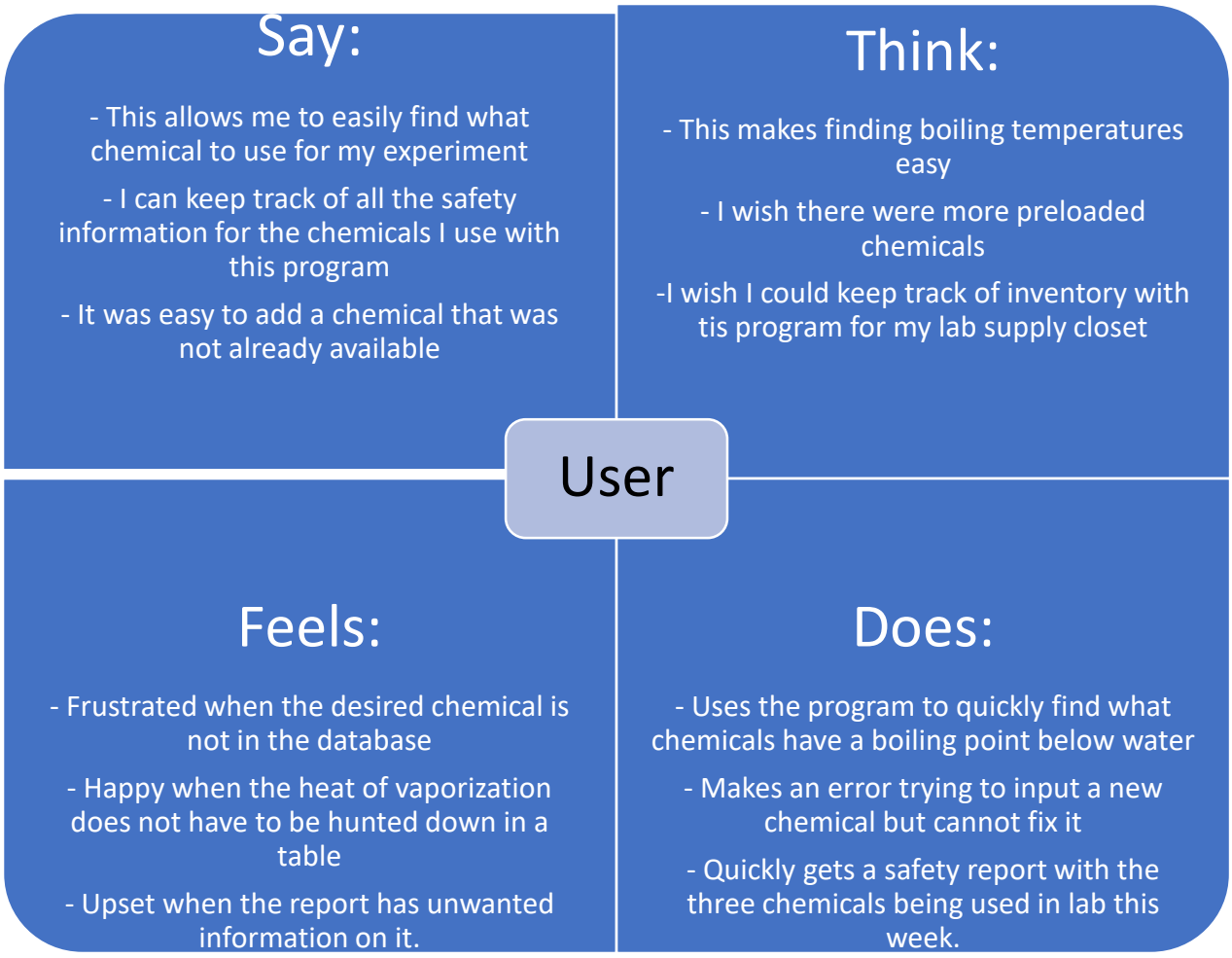
addChemical() – allows user to create a new chemical profile, can automatically calculate molecular mass based on chemical formula

makeReport() – formats a report with information on as many chemicals as the user wants

chemicalList() – allows user to see full chemical list

boilsHere() – finds all chemicals that boil within a certain range or above or below a certain number

freezeHere() – same as boilsHere but for freezing


Say:
- This allows me to easily find what chemical to use for my experiment
- I can keep track of all the safety information for the chemicals I use with this program
- It was easy to add a chemical that was not already available
Think:
- This makes finding boiling temperatures easy
- I wish there were more preloaded chemicals
-I wish I could keep track of inventory with tis program for my lab supply closet
User
Feels:
- Frustrated when the desired chemical is not in the database
- Happy when the heat of vaporization does not have to be hunted down in a table
- Upset when the report has unwanted information on it.
Does:
- Uses the program to quickly find what chemicals have a boiling point below water
- Makes an error trying to input a new chemical but cannot fix it
- Quickly gets a safety report with the three chemicals being used in lab this week.