

1.) Initial screen:

Project 3: CAP 4630/5605 - Introduction to AI (Spring 2019)

Step 1: UPLOAD ATTRIBUTES Step 2: UPLOAD CONSTRAINTS Step 3: UPLOAD PREFERENCES

Enter more attributes here: Enter more hard constraints here (in CNF form only): Enter more preferences here:

Insert attributes Clear Insert constraints Clear Insert preferences Clear

PROCESS DATA (Must before query execution)

Q1: Feasible objects? Clear Q2: 2 Random feasible objects? Clear

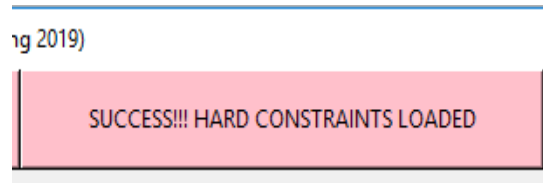
Q3: An optimal object? Clear Q4: All optimal objects? Clear

2.) Portion of the screen (with a change) after loading attributes from the file A_Input.txt

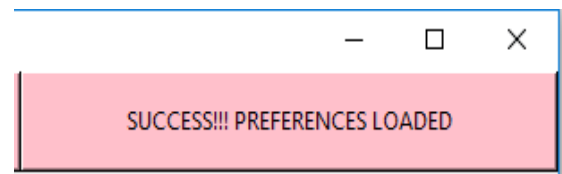
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SUCCESS!!! ATTRIBUTES LOADED

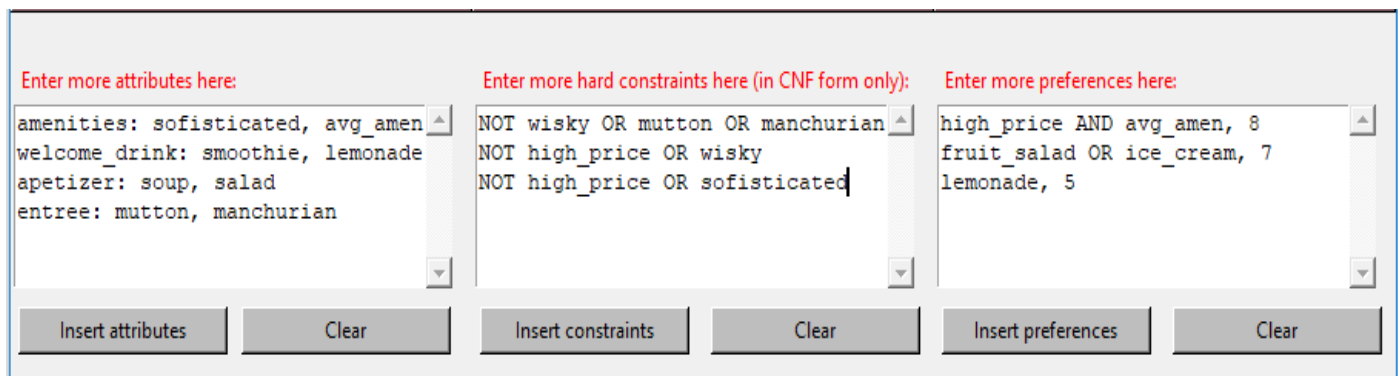
3.) Portion of the screen (with a change) after loading hard constraints from the file HC_Input.txt



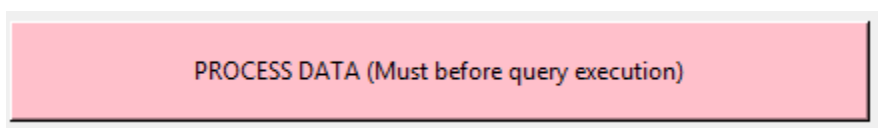
4.) Portion of the screen (with a change) after loading preferences from the file P_Input.txt



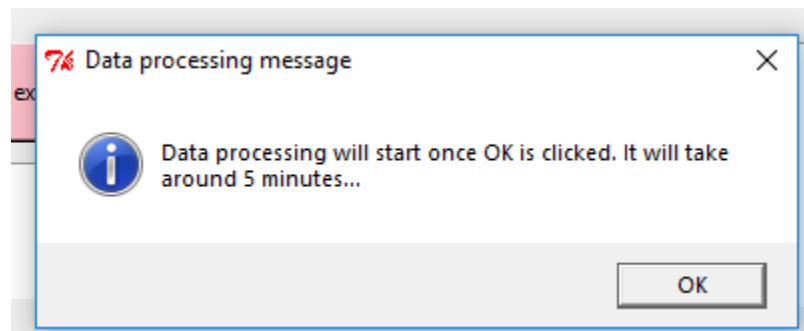
5.) Screenshot with manual input of attributes/ hard constraints/ preferences.

A screenshot of a web application interface with three input sections. Each section has a title in red, a text area with a scrollbar, and two buttons at the bottom. The first section is titled "Enter more attributes here:" and contains the text: amenities: sophisticated, avg_amen, welcome_drink: smoothie, lemonade, appetizer: soup, salad, entree: mutton, manchurian. The second section is titled "Enter more hard constraints here (in CNF form only):" and contains the text: NOT whisky OR mutton OR manchurian, NOT high_price OR whisky, NOT high_price OR sophisticated. The third section is titled "Enter more preferences here:" and contains the text: high_price AND avg_amen, 8, fruit_salad OR ice_cream, 7, lemonade, 5. The buttons are labeled "Insert attributes", "Clear", "Insert constraints", "Clear", "Insert preferences", and "Clear".

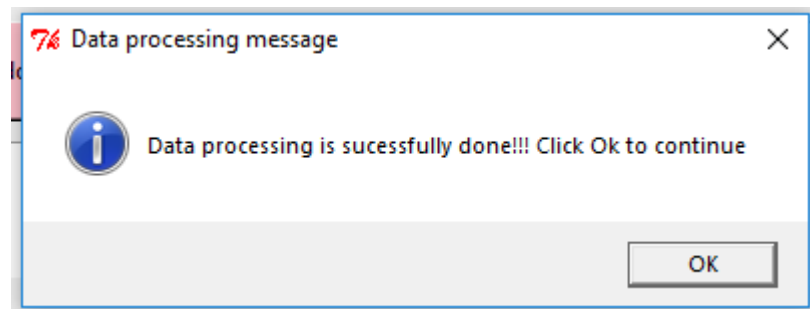
6.) Next step is to perform the computation. Click the button shown on the below screenshot.



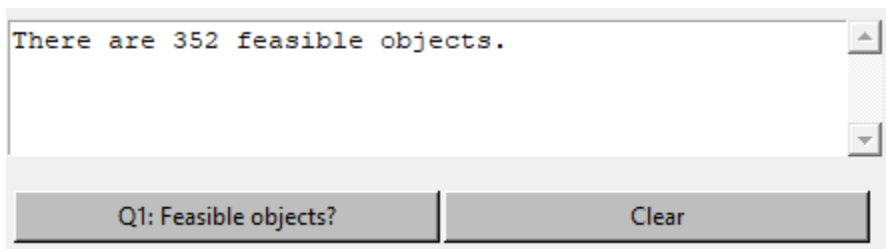
7.) A screenshot of the popup message before execution. Click on it to allow the program to proceed with the computation.



8.) Wait till the completion of the computation process. A message will pop up on completion like the below screenshot.



9.) Query 1 (Availability of feasible objects w.r.t. hard constraints):



10.) Query 2 (2 random feasible objects with their preference):

```
O_189: [rustic, low_price, no_net, avg_amen, smoothie, salad, mutton, beer, ice_cream, common_jogging_track, ] Preference value: 21

O_141: [rustic, low_price, no_net, sophisticated, smoothie, soup, manchurian, beer, ice_cream, private_jogging_track, ] Preference value: 30
```

Q2: 2 Random feasible objects? Clear

11.) Query 3 (An optimal object):

```
O_2: [rustic, low_price, no_net, sophisticated, lemonade, salad, mutton, whisky, ice_cream, private_jogging_track, ] Preference value: 13
```

Q3: An optimal object? Clear

12.) Query 4 (All optimal objects):

```
O_2: [rustic, low_price, no_net, sophisticated, lemonade, salad, mutton, whisky, ice_cream, private_jogging_track, ] Preference value: 13

O_4: [rustic, low_price, no_net, sophisticated, lemonade, soup, mutton, whisky, ice_cream, private_jogging_track, ] Preference value: 13
```

Q4: All optimal objects? Clear