# Task 8 & 9
# Morning Dress Up

**Task 8:**

      Based on the results after testing, we believe our model can be used in most activities as a recommender system but only for items in threes. With minimal changes and edits to our source code, you could output a combo meal from a fast food chain for instance. In order to determine whether or not a certain combo should be ordered based off of things like price, time of day, and total calories. The system would take these factors and assign them values to determine which combination of items would be the best suited for you at that time.

**Task 9:**

      The implemented computational model we have built is essentially a recommender system, specifically for recommending your outfit of the day (OOTD), in Prolog. The model we constructed would be the most quick and accurate given the situation. The user would be given options based on the belief set, the goal of the model is to take these beliefs and create a solution under which the user can be satisfied with the outfit chosen for them on the given day. The set consists of beliefs based on weather, mood, activity and available options consist of the general groups of tops, bottoms, shoes. Specific clothing items have special relationships with weather, mood, and activity conditions. For instance, a t-shirt will be attributed to sunny, cloudy, happy, tired, indifferent, as well as normal/fun/bum days for activities. Each clothing item has these similar conditions for them.

      The beliefs will be revised under a single condition which will be based on the user's response to an outfit. Once the user is prompted with whether or not they like an outfit, they can simply reply with a confirmation or a declination. Should the user accept the outfit, the program will exit and be finished with a statement of what clothes were chosen. Should the user decline, the program will go back through the system and offer another option for an outfit. Another option is provided which allows a certain item to be switched for another. This will act as the primary function for belief revision. Precedence for activity, weather, and mood for the day is going to be determined through a point system where certain conditions are going to have higher values than others. After the initial comparison, another one is conducted within the subsection of clothes ( since each item will also have an inherent value to be compared to the general condition values) to see how relevant each item is specifically for the condition of the day. This method allows for the most relevant options to be initially displayed. The user will be allowed the option to choose one article from the outfit to switch and will be prompted with a replacement item. This is easier to implement since it's essentially just going to return the second most relevant item and will replicate this process for returning completely different outfits

We have used list traversal to accumulate the beliefs. Weather, mood and activity should vary with each new startup of the system and should yield unique combinations of clothes for a given situation. The model performs loops after every rejection of the outfit , so the system can parse through all the options again and offer a new option for an outfit. Since there are only a set number of clothing options, it will reach a point where it will repeat options if continued to loop through

We had some limitations as we did not implement the belief set for accessories due to lack of time, the scope of the project was shortened. The drawbacks we saw from the model that can be seen in most recommendation systems would be the lack of data, the bigger the data [belief set] the better the model. Another drawback seen is the change in fashion trends as people change their opinion on different types of clothing , the model starts to become out of date. Peers also have a large effect on how one may go about dressing themself on any given day. Many people look for inspiration on either their idols or their peers which can at times lead to some odd variations of what would be considered appropriate dress depending on the conditions of the day. This factor not being accounted for was initially left out due to neglecting the fact but would actually be more difficult to implement than not.