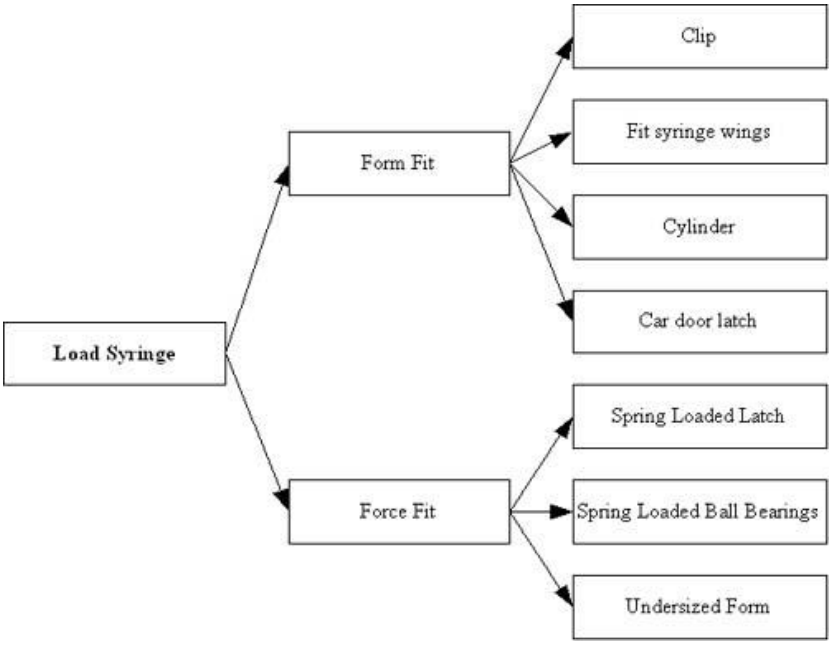
Design Project I – Coffee Mug

This project was based around our group being to create the best possible solution for people who only have 1 finger total, but still want to use a coffee mug. In this project we learned how to properly go through the step of the design process in a real situation. We physically completed every step except for creating the actual solution, and testing our prototype. We used tools such as an AHP chart, a classification tree and a decision matrix to justify and determine our design. In our classification tree we contemplated criteria such as plastic, aluminum, suction lid, snap on lid, etc. In our AHP table we weighed criteria such as safety, durability, cost, etc. We even used clay and the SolidWorks program to create a prototype or crude solution idea.

	Simple Design	Easy to load wood	Easy to load food	Easy to clean	Low maintenance	Envir. Friendly	Safe	Efficient	Total	Weight
Simple design	1	3	0.33	0.33	1	7	0.11	0.2	12.97	**0.076**
Easy to load wood	0.33	1	0.2	0.2	0.33	5	0.11	0.14	7.31	**0.043**
Easy to load food	3	5	1	5	1	7	0.14	0.2	22.34	**0.132**
Easy to clean	3	5	0.2	1	1	5	0.11	0.2	15.51	**0.091**
Low maintenance	1	3	1	1	1	7	0.14	0.33	14.47	**0.085**
Envir. Friendly	0.14	0.2	0.14	0.2	0.14	1	0.11	0.11	2.04	**0.012**
Safe	9	9	7	9	7	9	1	9	60	**0.354**
Efficient	5	7	5	5	3	9	0.11	1	35.11	**0.207**