This thesis focuses on reconstructing a subset of Pygmalion, a programming system that was revolutionary for its time, due to its use of programming by demonstration and iconic (visual) programming. With no current runnable version of the software available, reconstructing Pygmalion is crucial to preserve these unique ideas and allow users to interact with them. Our reconstruction focuses on one example from the original Pygmalion thesis, which loosely shows how to create a new icon capable of computing the factorial of an integer. We used an iterative methodology to learn more about the original system while creating two consecutive designs for our reconstruction of the system. Through this process, we gained deeper knowledge of Pygmalions features, and created software that fulfills our goal of recreating the factorial example.