The purpose of this study is to design a 3 axis automated programming machine for programming devices such as microcontrollers, EPROMs and CPLDs. While programming numerous devices, an automated system is needed. For his purpose, a prototype system is designed with 3 axis. The system consists of electronics, mechanics and vacuum parts. All of these are controlled by ATMEL’s ATMEGA128 8 bit microcontroller using C language. In this study, microcontrollers are programmed which have 44 pins with TQFP package. With some modifications on hardware and software, the designed machine is able to program the devices which have different packages. Thanks to the user interface software, programming results which of the devices are programmed and which are not) can be seen on PC.