

## State Diagram

To depict the events that occur in a program as it runs, programmers use state diagrams. In a shopping program, the shopping cart will have an empty state, a state with item in it, and a checkout state. A state diagram will demonstrate how external processes such as price changes or taxes interact with these states, and how this state interacts with other states, such as capturing payment.

In the Turtle1 program, one specific state I diagrammed was the Move button. When the move button is clicked, a series of states change. The program will then check the state of the other input collected from the user, such as movement distance, direction, and whether or not the pen is down. It will also disable the end state, as the program cannot be killed while the move function is running.

