

Vending Machine using Verilog HDL

A vending machine is an automated machine that dispenses various products such as snacks, beverages, newspapers, tickets, etc., to the customers when money or credit card is inserted. The machine usually works when a product is selected, and some money is put in a slot. Then, a button needs to be pushed or a lever pulled. If there is enough money, the selected item will be dropped to a tray, where it can be taken out by the person making the purchase.

This project aims to design a **vending machine** that can dispense three products of different prices with the additional feature of 'return change' when a higher denomination coin is inserted and 'return money' when the request is canceled. The machine accepts coins of denominations five and ten. The design is achieved by formulating the **Verilog code** using behavioral modeling and simulating the testbench for three products.