VENDING MACHINE

Objective- To Implement Vending Machine using Verilog and see how the working of a vending machine takes place.

Implementation:-Our project will be implemented as a RTL design.We will use verilog language to implement all the logic designs of our vending machine.

Functionality: In this program a user can choose an item among any of the four items in the vending machine.
These four Items will be edible items of different cost. A 2-bit binary number is used to represent these four items. Binary numbers also represent their cost.
Eg:- 00-(Rs 5)-Juice bottle, 01-(Rs 10)- biscuit,
10-(Rs 15)- water bottle, 11-(Rs 20)-Chips.
Only Rs5,Rs10 or Rs20 will be accepted
.
There will be four parameters representing the current state of the machine which will be decided by the amount being paid to the vending machine.
s0=00(Rs0 state)
s1=01(Rs5 state)
s2=10(Rs 10 state
s2=11(Rs15 state)

The excess or refundable amount on the selected product that is chosen will be returned by the machine along with the chosen item, also if anyone does not pay the necessary amount required for that particular item in a given period of time then his/her money will be returned back.
If anyone successfully completes the payment then his product will be received.

CAR PARKING SYSTEM

Objective- Designing an automated parking system
using verilog.

Implementation –

It would be implemented as a RTL design.

Functionality:-

In the entrance of the parking system ,there is a sensor which gets activated when a vehicle approaches. Once the sensor is triggered
A unique password is generated using some parameters.
The data and time of arrival is noted. Then a specific parking slot is allotted to the car. At the time of departure, cost of parking is taken which is generated as per the time .Then design asks for the password and if the password is correct the gate would open ,otherwise the gate is still locked.