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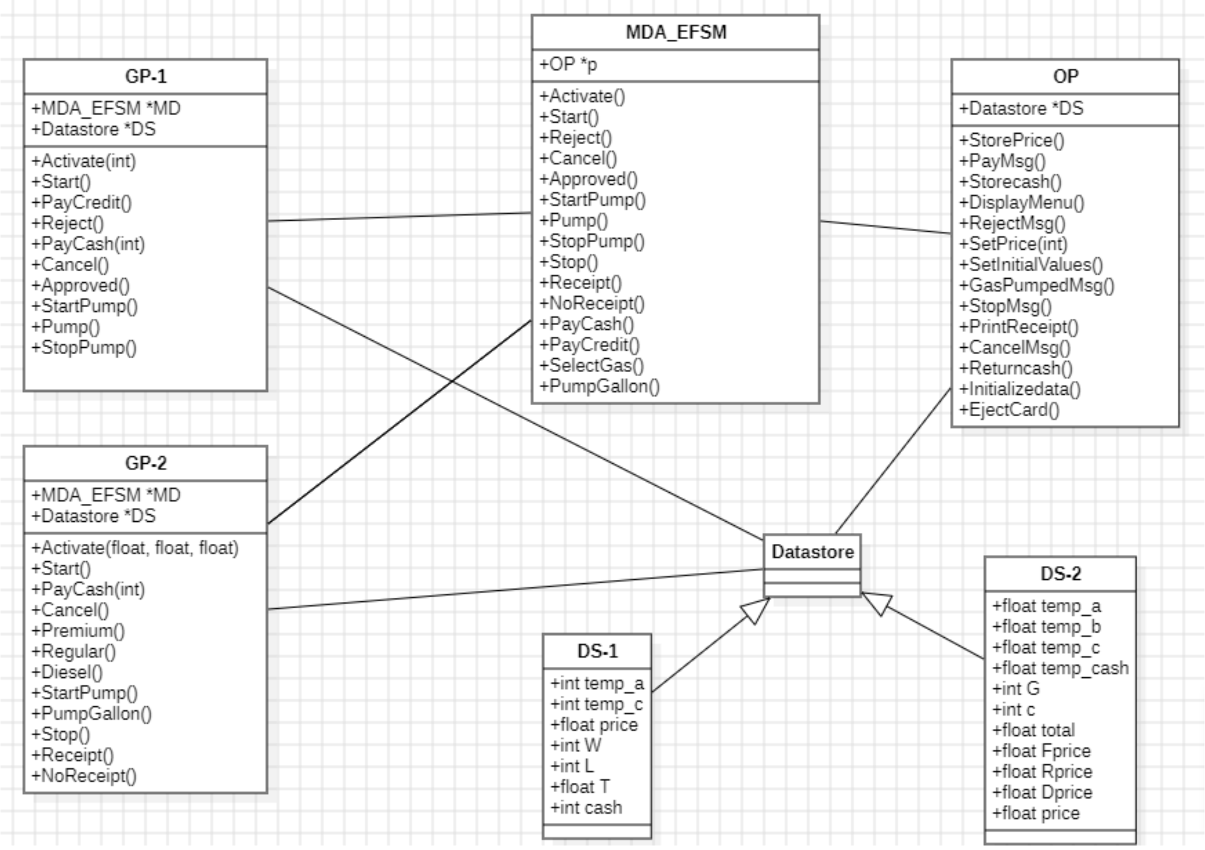
SSA PROJECT PART #1

CLASS Diagram:



MDA-EFSM Events:

Activate()

Start()

Reject()

Cancel()

Approved()

StartPump()

Pump()

StopPump()

Stop()

Receipt()

NoReceipt()

PayCash()

PayCredit()

SelectGas(int g) // Regular: g=1; Premium: g=2; Diesel: g=3

PumpGallon()

MDA-EFSM Actions:

StorePrice()	// Store price(s) for the gas from temporary datastore
PayMsg()	// Displays type of Payment Method
Storecash()	// Stores cash from data store
DisplayMenu()	// Display Menu with a list of selections
RejectMsg()	// Displays credit card not approved message
SetPrice(int g)	// Set the price for gas identified by g
SetInitialValues()	// Set L or G and total to 0
GasPumpedMsg()	// Displays the amount of gas disposed
StopMsg()	// Stop Pump Message
PrintReceipt()	// Print receipt
CancelMsg()	// Displays the cancellation message
Returncash()	// Return the remaining cash
Initializedata()	// Set value of price and cash to 0
EjectCard()	// Remove the card

Operations of GasPump-1:

- Public void Activate(int a)

```
{
        if(a>0)
        {
                DS -> temp_a = a
                DS -> SetPrice(a);
                MD -> Activate();
        }
}
```

- Public void Start()

```
{
        MD -> Start();
}
```

- Public void PayCredit()

```
{
        MD -> PayCredit();
}
```

- Public void Reject()

```
{
        MD -> Reject();
```

```
    }
➢   Public void PayCash(int c)
    {
            If(c>0)
            {
                    DS->temp_c=c;
                    DS -> SetCash(c);
                    MD -> PayCash();
            }
    }

➢   Public void Cancel()
    {
            Md -> Cancel();
    }

➢   Public void Approved()
    {
            DS -> setW(1);
            MD -> Approved();
    }

➢   Public void StartPump()
    {
            MD -> StartPump();
    }

➢   Public void Pump()
    {
            If((DS.getW()==1 || DS.getW()==0) && (DS.getcash() >= (DS.getPrice()*(DS.getL() + 1)))
            {
                    MD -> StopPump();
            }
            Else if((DS.getW()==0) && (DS.getcash() < (DS.getPrice()*(DS.getL() + 1)))
            {
                    MD -> Pump();
            }
    }

➢   Public void StopPump()
    {
            MD -> StopPump();
    }
```

Operations of GasPump-2:

```
➢   Public void Activate(float a, float b, float c)
    {
            If(a>0 && b>0 && c>0)
            {
                    DS -> temp_a = a;
                    DS -> temp_b = b;
```

```
                DS -> temp_c = c;
                DS -> setRprice(a);
                DS -> setPprice(b);
                DS -> setDprice(c);
                MD -> Activate();
            }
    }

➢   Public void Start()
    {
            MD -> Start();
    }

➢   Public void PayCash(int c)
    {
            If(c>0)
            {
                DS -> setcash(c);
                MD -> PayCash();
            }
    }

➢   Public void Cancel()
    {
            MD -> Cancel();
    }

➢   Public void Premium()
    {
            MD -> SelectGas(2);
    }

➢   Public void Diesel()
    {
            MD -> SelectGas(3);
    }

➢   Public void Regular()
    {
            MD -> SelectGas(1);
    }

➢   Public void StartPump()
    {
            MD -> StartPump();
    }

➢   Public void PumpGallon()
    {
            If(DS.getcash() >= (DS.getprice()*(DS.getG() + 1)))
            {
                MD -> Stop();
            }
```

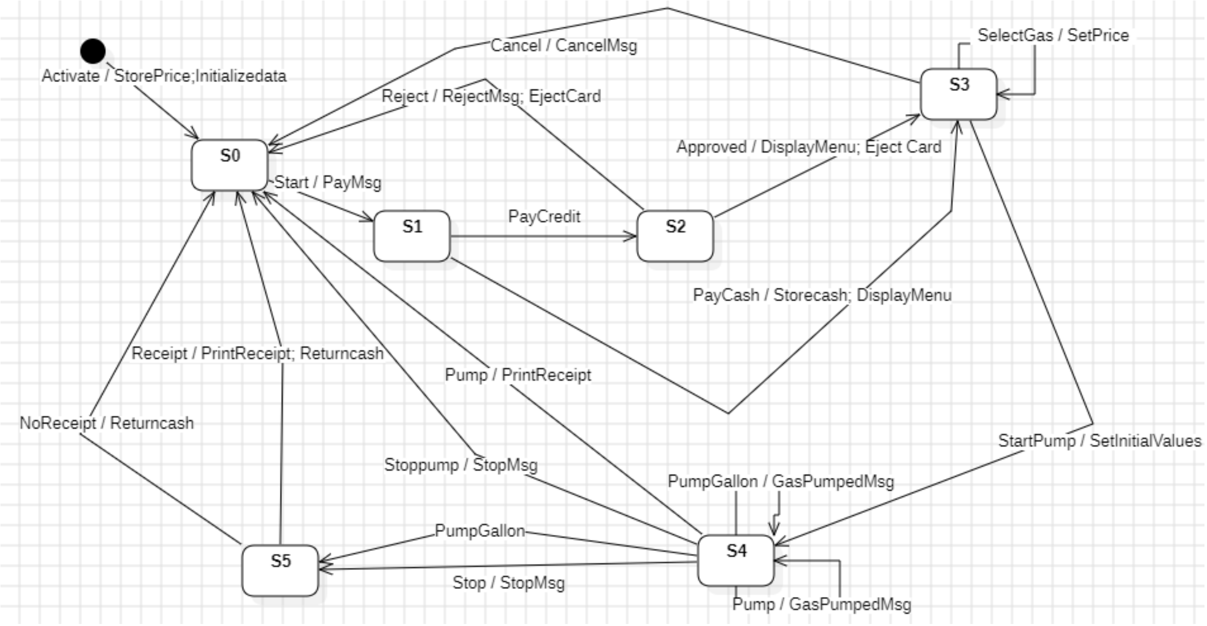
```
                Else if(DS.getcash() < (DS.getprice()*(DS.getG() + 1)))
                {
                        MD -> PumpGallon();
                }
        }

➢   Public void Stop()
        {
                MD -> Stop();
        }

➢   Public void Receipt()
        {
                MD -> Receipt();
        }

➢   Public void NoReceipt()
        {
                MD -> NoReceipt();
        }
```

State Diagram:


Activate / StorePrice;Initializedata
S0
Cancel / CancelMsg
Reject / RejectMsg; EjectCard
SelectGas / SetPrice
S3
Approved / DisplayMenu; Eject Card
Start / PayMsg
S1
PayCredit
S2
PayCash / Storecash; DisplayMenu
Receipt / PrintReceipt; Returncash
Pump / PrintReceipt
NoReceipt / Returncash
StartPump / SetInitialValues
Stoppump / StopMsg
PumpGallon / GasPumpedMsg
PumpGallon
S5
S4
Stop / StopMsg
Pump / GasPumpedMsg