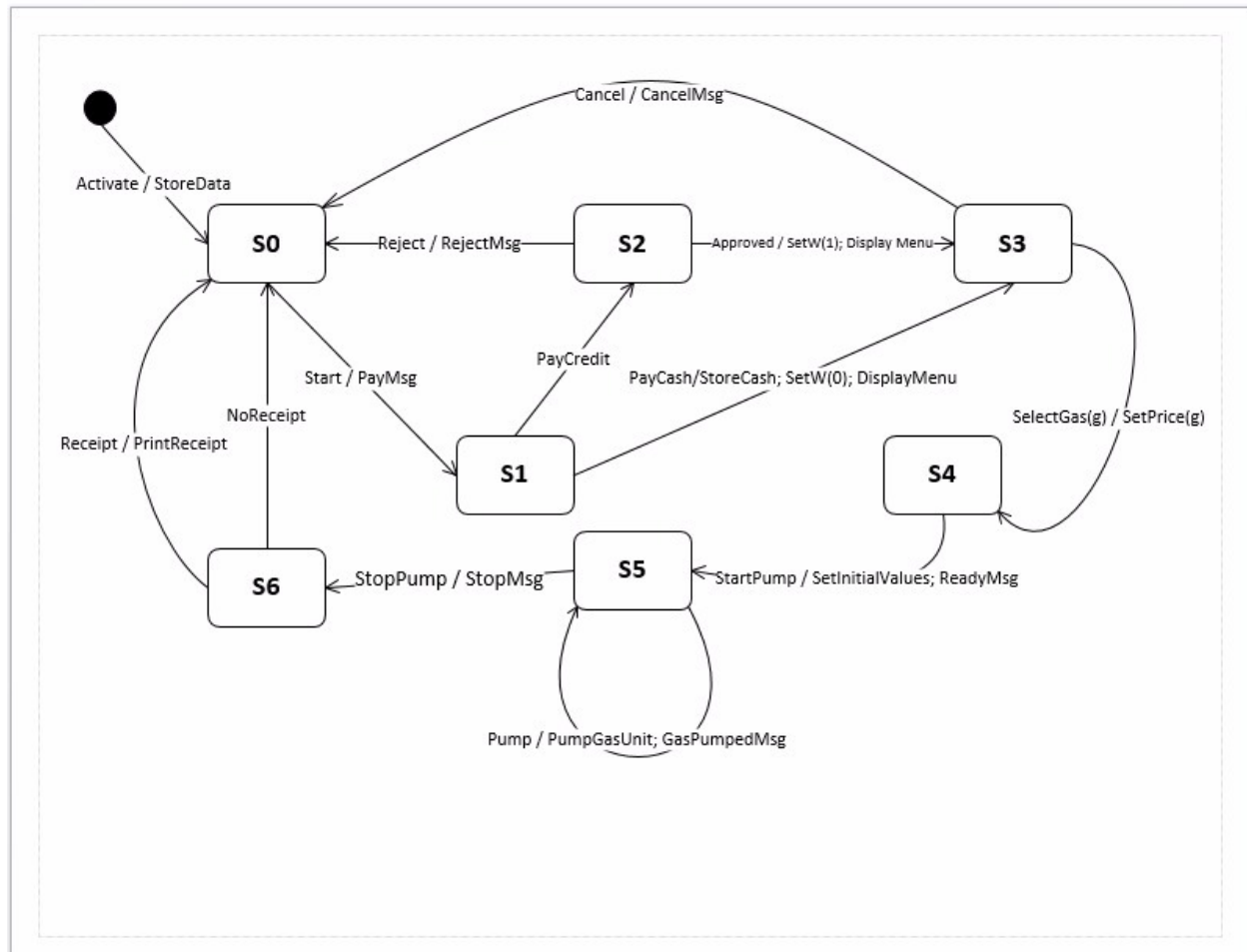Anvesh Gangasani
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# Project
# MDA-EFSM

**List of events for the MDA-EFSM:**

Activate()
Start()
PayCredit()
PayCash()
Reject()
Cancel()
Approved()
StartPump()
Pump()
StopPump()
SelectGas(int g)
Receipt()
NoReceipt()

**List of actions for the MDA-EFSM**:

| | |
|---|---|
| StoreData | // stores price(s) for the gas from the temporary data store |
| PayMsg | // displays a type of payment method |
| StoreCash | // stores cash from the temporary data store |
| DisplayMenu | // display a menu with a list of selections |
| RejectMsg | // displays credit card not approved message |
| SetW(int k) | // set value for credit/cash flag |
| SetPrice(int g) | // set the price for the gas identified by g identifier |
| ReadyMsg | // displays the ready for pumping message |
| SetInitialValues | // set G or L to 0 |
| PumpGasUnit | // disposes unit of gas and counts Number of units disposed |
| GasPumpedMsg | // displays the amount of disposed gas |
| StopMsg | // stop pump message and receipt msg |
| PrintReceipt | // print a receipt |
| CancelMsg | // displays a cancellation message |

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**state diagram of the MDA-EFSM:**



**Pseudo-code:**

**Operations of the Input Processor: (GasPump-1)**
Note:
m: is a pointer to the MDA-EFSM object
d: is a pointer to the Data Store object

```
Activate(float a, float b)
{
        if ((a>0)&&(b>0))
        {
                d->temp_a=a;
                d->temp_b=b;
                m->Activate()
        }
}
```

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```
Start()
{
        m->Start();
}
PayCredit()
{
        m->PayCredit();
}
Reject()
{
        m->Reject();
}
Approved()
{
        m->Approved();
}

Cancel()
{
        m->Cancel();
}
Super()
{
        m->SelectGas(2)
}
Regular()
{
        m->SelectGas(1)
}
StartPump()
{
        m->StartPump();
}
PumpGallon()
{
        m->Pump();
}
StopPump()
{
        m->StopPump();
        m->Receipt();
}
```

**Operations of the Input Processor:(GasPump-2)**

Note:
cash: contains the value of cash deposited
price: contains the price of the selected gas
L: contains the number of liters already pumped

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cash , L, price are in the data store
m: is a pointer to the MDA-EFSM object
d: is a pointer to the Data Store object

```
Activate(int a, int b, int c)
{
        if ((a>0)&&(b>0)&&(c>0)
        {
                d->temp_a=a;
                d->temp_b=b;
                d->temp_c=c;
                m->Activate()
        }
}
Start()
{
        m->Start();
}
PayCash(int c)
{
        if (c>0)
        {
                d->temp_c=c;
                m->PayCash()
        }
}
Cancel()
{
        m->Cancel();
}
Premium()
{
        m->SelectGas(3);
}
Super()
{
        m->SelectGas(2)
}

Regular()
{
        m->SelectGas(1);
}
StartPump()
{
        m->StartPump();
}
PumpLiter()
{
```

```
        if (d->cash<( d->price *d->L+1))
                m->StopPump();
        else
                m->Pump()
}




Stop()
{
        m->StopPump();
}
Receipt()
{
        m->Receipt();
}
NoReceipt()
{
        m->NoReceipt();
}
```