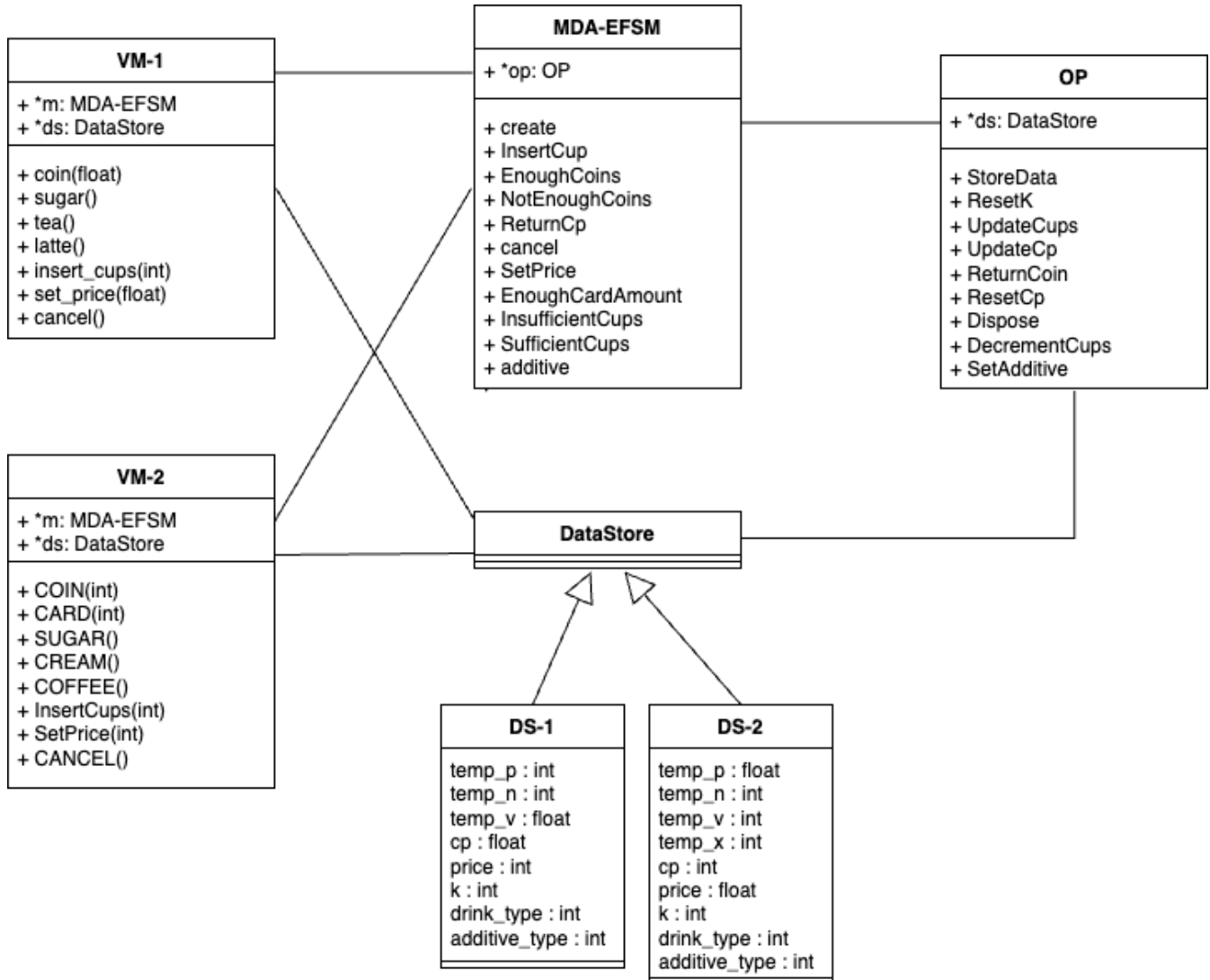


SSA (CS-586) Project – MDA-EFSM Part 1

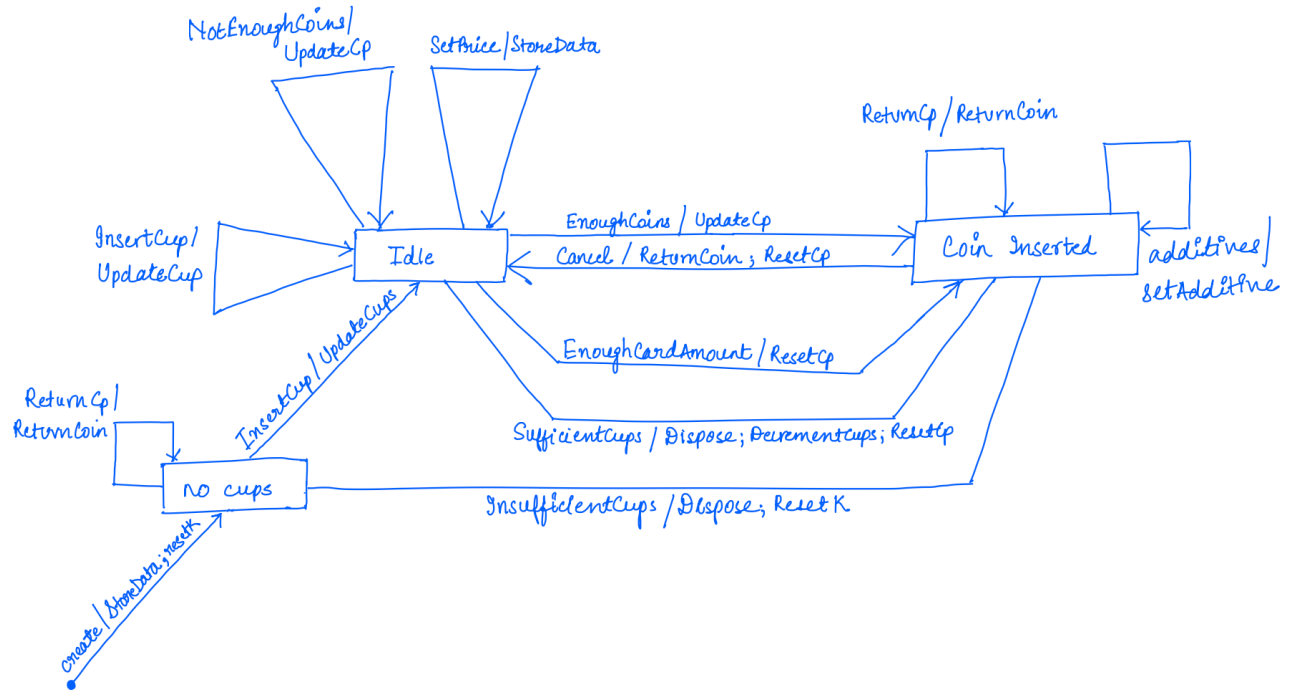
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Class Diagram



State Diagram



Input Processor – VM1

```

create(int p) {
    d → temp_p = p
    m → create()
}

insert_cups(int n) {
    if (n > 0)
        d → temp_n = n
        m → InsertCup ()
}

coin(float v) {
    d → temp_v = v
    if (v + d → cp ≥ d → price)
        m → EnoughCoins ()
    else if (v + d → cp < d → price)
        m → NotEnoughCoins ()
    else
        m → ReturnCp()
}
  
```

```

set_price(float p) {
    m→SetPrice()
}

cancel() {
    m→cancel()
}

tea() {
    d→drink_type = 1
    if (d→k > 1)
        m→SufficientCups()
    else
        m→InsufficientCups()
}

latte() {
    d→drink_type = 2
    if (d→k > 1)
        m→SufficientCups()
    else
        m→InsufficientCups()
}

sugar() {
    d→additive_type = 0
    m→additive()
}

```

Input Processor – VM2

```

CREATE (float p) {
    d → temp_p = p
    m → create ()
}

InsertCups(int n) {
    if (n > 0)
        d → temp_n = n
        m → InsertCup ()
}

```

```

COIN(int v) {
    d→temp_v = v
    if (v + d→cp >= d→price)
        m→EnoughCoins ()
    else if (v + d→cp < d→price)
        m→NotEnoughCoins ()
    else
        m→ReturnCp()
}

```

```

SetPrice (int p) {
    m→ SetPrice()
}

```

```

CANCEL() {
    m→cancel()
}

```

```

CARD(int x) {
    d→temp_x = x
    if (x >= d→price)
        m→EnoughCardAmount()
}

```

```

COFFEE() {
    d→drink_type = 2
    if (d→k > 1)
        m→SufficientCups()
    else
        m→InsufficientCups()
}

```

```

SUGAR() {
    d→additive_type = 0
    m→additive()
}

```

```

CREAM() {
    d→additive_type = 1
    m→additive()
}

```

Meta Events

- create
- InsertCup
- EnoughCoins
- NotEnoughCoins
- ReturnCp
- cancel
- SetPrice
- EnoughCardAmount
- InsufficientCups
- SufficientCups
- additive

Meta Actions

- StoreData // stores *price* of item from temp_p
- ResetK // sets value of $k = 0$
- UpdateCups // updates the value of k
- UpdateCp // updates the value of Cp
- ReturnCoin // returns the coin/s
- ResetCp // sets the value of $Cp = 0$
- Dispose // add additives and dispose drink based on value of *drink_type*
- DecrementCups // decrements the value of k by 1
- SetAdditive // sets additive to 0 for *sugar* & 1 for *cream*