

MDA-EFSM Events:

1. create()
2. insert_cups(int n) // n represents # of cups
3. coin(int f) // $f=1$: sufficient funds inserted for a drink
// $f=0$: not sufficient funds for a drink
4. card()
5. cancel()
6. set_price()
7. dispose_drink(int d) // d represents a drink id
8. additive(int a) // a represents additive id

MDA-EFSM Actions:

1. StorePrice()
2. ZeroCF() // zero Cumulative Fund cf
3. IncreaseCF() // increase Cumulative Fund cf
4. ReturnCoins() // return coins inserted for a drink
5. DisposeDrink(int d) // dispose a drink with d id
6. DisposeAdditive(int $A[i]$) //dispose marked additives in A list,
// where additive with i id is disposed when $A[i]=1$

<p>Vending-Machine-1</p> <pre> create(int p) { d->temp_p=p; m->create(); } coin(int v) { d->temp_v=v; if (d->cf+v>=d->price) m->coin(1); else m->coin(0); } card(float x) { if (x>=d->price) m->card(); } sugar() { m->additive(1); } tea() { m->dispose_drink(1); } chocolate() { m->dispose_drink(2); } insert_cups(int n) { m->insert_cups(n); } set_price(int p) { d->temp_p=p; m->set_price() } cancel() { m->cancel(); } </pre>	<p>where,</p> <p><i>m</i>: pointer to the MDA-EFSM <i>d</i>: pointer to the data store DS-1</p> <p>In the data store: <i>cf</i>: represents a cumulative fund <i>price</i>: represents a price for a drink</p>
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<p>Vending-Machine-2</p> <pre> CREATE(float p) { d->temp_p=p; m->create(); } COIN(float v) { d->temp_v=v; if (d->cf+v>=d->price) m->coin(1); else m->coin(0); } SUGAR() { m->additive(2); } CREAM() { m->additive(1); } COFFEE() { m->dispose_drink(1); } InsertCups(int n) { m->insert_cups(n); } SetPrice(float p) { d->temp_p=p; m->set_price() } CANCEL() { m->cancel(); } </pre>	<p>where,</p> <p><i>m</i>: pointer to the MDA-EFSM <i>d</i>: pointer to the data store DS-2</p> <p>In the data store: <i>cf</i>: represents a cumulative fund <i>price</i>: represents a price for a drink</p>
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