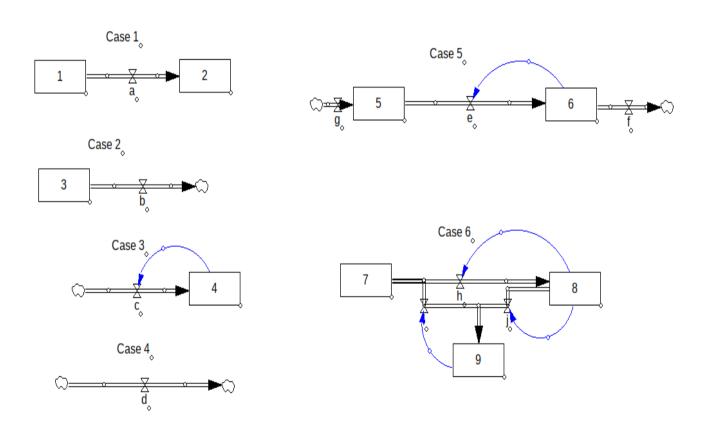
API System Models (MyVensim)

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Base cases:



```
main()
{
          Model m1("Model1");
          System s1("1", 100), s2("2", 0);
          Flow *f1 = new MyFlow();

          m1.add(&s1);
          m1.add(&s2);
          m1.add(f1);
          f1->connect(&s1, &s2);

          m1.simulate(0,100,1);
          m1.results();

          f1->disconnect();
          delete f1;
          return 0;
}
```

Pseudocode: Case 2

```
main()
{
          Model m1("Model1");
          System s1("3", 100);
          Flow *f1 = new MyFlow();

          m1.add(&s1);
          m1.add(f1);
          f1 → connect(&s1, NULL);

          m1.simulate(0,100,1);
          m1.results();

          f1->disconnect();

          delete f1;
          return 0;
}
```

```
main()
       Model m1("Model1");
       System s1("4", 100);
       Flow *f1 = new MyFlow();
       m1.add(&s1);
       m1.add(f1);
       f1 \rightarrow connect(NULL, \&s1);
       m1.simulate(0,100,1);
       m1.results();
       f1->disconnect();
       delete f1;
       return 0;
}
                                   Pseudocode: Case 4
main()
{
       Model m1("Model1");
       Flow *f1 = new MyFlow();
       m1.add(f1);
       f1 \rightarrow connect(NULL, NULL);
       m1.simulate(0,100,1);
       m1.results();
       f1->disconnect();
       delete f1;
       return 0;
```

}

```
main()
{
       Model m1("Model1");
       System s1("5", 100), s2("6", 0);
       Flow *f1 = new MyFlow();
       Flow *f2 = new MyFlow();
       Flow *f3 = new MyFlow();
       m1.add(&s1);
       m1.add(&s2);
       m1.add(f1);
       m1.add(f2);
       m1.add(f3);
       f1 \rightarrow connect(NULL, \&s1);
       f2->connect(&s1, &s2);
       f3 \rightarrow connect(\&s2, NULL);
       m1.simulate(0,100,1);
       m1.results();
       f1->disconnect();
       delete f1;
       delete f2;
       delete f3;
       return 0;
}
```

```
main()
       Model m1("Model3");
System s1("7", 100), s2("8", 0), s3("9", 100);
       Flow *f1 = new MyFlow("i");
       Flow *f2 = new MyFlow("j");
       Flow *f3 = new MyFlow("k");
       m1.add(&s1);
       m1.add(&s2);
       m1.add(&s3);
       m1.add(f1);
       m1.add(f2);
       m1.add(f3);
       f1->connect(&s1, &s2);
       f2->connect(&s1, &s3);
       f3->connect(&s2, &s3);
       m1.simulate(0,100,1);
       m1.results();
       f1->disconnect();
       f2 \rightarrow disconnect();
       f3 \rightarrow disconnect();
       delete f1;
       delete f2;
       delete f3;
       return 0;
}
```

UML Diagram

