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1 C:\Users\AlanKing\Miniconda3\envs\MOSDEX-test\
  python.exe C:/Users/AlanKing/Documents/GitHub/
  MOSDEX-python/src/read.py
2 YES: Mosdex problem sailco_1-3.json is a valid
  instance of Mosdex schema MOSDEXSchemaV1-3-ajk.json
3
4 ALGORITHM      ['sailcoSolve']
5 MODULE         ['sailco']
6
7 sailco
8 CONSTRAINT     ['ctCapacity', 'ctBoat', 'ctBoat_1']
9 TERM           ['ctCapacity_regular', 'ctBoat_regular
  ', 'ctBoat_extra', 'ctBoat_inventory', '
  ctBoat_lagged_inventory']
10 VARIABLE      ['regular', 'extra', 'inventory']
11 DATA         ['periods', 'demands', 'parameters', '
  production']
12 OBJECTIVE     ['totalCost']
13
14 **** Executing sailcoSolve ****
15
16 ***List the Tables***
17
18 **metadata_table**
19 module_name|item_name                |class_name|name
           |type    |usage
20 -----|-----|-----|----
      -----|-----|-----
21 sailco    |periods                |DATA      |
  Periods   |INTEGER|KEY
22 sailco    |demands                |DATA      |
  Periods   |INTEGER|FOREIGN_KEY
23 sailco    |demands                |DATA      |
  Demands   |DOUBLE |VALUE
24 sailco    |parameters             |DATA      |Name
           |STRING |KEY
25 sailco    |parameters             |DATA      |
  Value     |DOUBLE |VALUE

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26	sailco	regular	VARIABLE	
	Periods	INTEGER FOREIGN_KEY		
27	sailco	regular	VARIABLE	
	Column	STRING  KEY		
28	sailco	regular	VARIABLE	
	LowerBound	DOUBLE  LOWER_BOUND		
29	sailco	regular	VARIABLE	
	UpperBound	DOUBLE  UPPER_BOUND		
30	sailco	regular	VARIABLE	
	Objective	DOUBLE  OBJECTIVE_COEFFICIENT		
31	sailco	regular	VARIABLE	
	Value	DOUBLE  VARIABLE_VALUE		
32	sailco	extra	VARIABLE	
	Periods	INTEGER FOREIGN_KEY		
33	sailco	extra	VARIABLE	
	Column	STRING  KEY		
34	sailco	extra	VARIABLE	
	LowerBound	DOUBLE  LOWER_BOUND		
35	sailco	extra	VARIABLE	
	UpperBound	DOUBLE  UPPER_BOUND		
36	sailco	extra	VARIABLE	
	Objective	DOUBLE  OBJECTIVE_COEFFICIENT		
37	sailco	extra	VARIABLE	
	Value	DOUBLE  VARIABLE_VALUE		
38	sailco	inventory	VARIABLE	
	Periods	INTEGER FOREIGN_KEY		
39	sailco	inventory	VARIABLE	
	Column	STRING  KEY		
40	sailco	inventory	VARIABLE	
	Inventory	DOUBLE  LOWER_BOUND		
41	sailco	inventory	VARIABLE	
	UpperBound	DOUBLE  UPPER_BOUND		
42	sailco	inventory	VARIABLE	
	Objective	DOUBLE  OBJECTIVE_COEFFICIENT		
43	sailco	inventory	VARIABLE	
	Value	DOUBLE  VARIABLE_VALUE		
44	sailco	ctCapacity	CONSTRAINT	
	Periods	INTEGER FOREIGN_KEY		

45	sailco	ctCapacity	CONSTRAINT Row
		STRING  KEY	
46	sailco	ctCapacity	CONSTRAINT
	Sense	STRING  SENSE	
47	sailco	ctCapacity	CONSTRAINT RHS
		DOUBLE  RHS	
48	sailco	ctCapacity	CONSTRAINT
	Value	DOUBLE  CONSTRAINT_VALUE	
49	sailco	ctBoat	CONSTRAINT
	Periods	INTEGER FOREIGN_KEY	
50	sailco	ctBoat	CONSTRAINT Row
		STRING  KEY	
51	sailco	ctBoat	CONSTRAINT
	Sense	STRING  SENSE	
52	sailco	ctBoat	CONSTRAINT RHS
		DOUBLE  RHS	
53	sailco	ctBoat	CONSTRAINT
	Value	DOUBLE  CONSTRAINT_VALUE	
54	sailco	ctBoat_1	CONSTRAINT
	Periods	INTEGER FOREIGN_KEY	
55	sailco	ctBoat_1	CONSTRAINT Row
		STRING  KEY	
56	sailco	ctBoat_1	CONSTRAINT
	Sense	STRING  SENSE	
57	sailco	ctBoat_1	CONSTRAINT RHS
		DOUBLE  RHS	
58	sailco	ctBoat_1	CONSTRAINT
	Value	DOUBLE  CONSTRAINT_VALUE	
59	sailco	totalCost	OBJECTIVE
	Value	DOUBLE  OBJECTIVE_VALUE	
60	sailco	ctCapacity_regular	TERM  Row
		STRING  FOREIGN_KEY	
61	sailco	ctCapacity_regular	TERM
	Column	STRING  FOREIGN_KEY	
62	sailco	ctCapacity_regular	TERM
	Value	DOUBLE  MATRIX_ENTRY	
63	sailco	ctBoat_regular	TERM  Row
		STRING  FOREIGN_KEY	

64	sailco	ctBoat_regular	TERM	
	Column	STRING  FOREIGN_KEY		
65	sailco	ctBoat_regular	TERM	
	Value	DOUBLE  MATRIX_ENTRY		
66	sailco	ctBoat_extra	TERM	Row
		STRING  FOREIGN_KEY		
67	sailco	ctBoat_extra	TERM	
	Column	STRING  FOREIGN_KEY		
68	sailco	ctBoat_extra	TERM	
	Value	DOUBLE  MATRIX_ENTRY		
69	sailco	ctBoat_inventory	TERM	Row
		STRING  FOREIGN_KEY		
70	sailco	ctBoat_inventory	TERM	
	Column	STRING  FOREIGN_KEY		
71	sailco	ctBoat_inventory	TERM	
	Value	DOUBLE  MATRIX_ENTRY		
72	sailco	ctBoat_lagged_inventory	TERM	
	CtBoat	STRING  FOREIGN_KEY		
73	sailco	ctBoat_lagged_inventory	TERM	
	Column	STRING  FOREIGN_KEY		
74	sailco	ctBoat_lagged_inventory	TERM	
	Value	DOUBLE  MATRIX_ENTRY		
75				
76	**modules_table**			
77	module_name	item_name	class_name	
	type_name	table_name		
78	-----	-----	-----	---
	-----	-----		
79	sailco	periods	DATA	
	INPUT	sailco_periods		
80	sailco	demands	DATA	
	INPUT	sailco_demands		
81	sailco	parameters	DATA	
	INPUT	sailco_parameters		
82	sailco	regular	VARIABLE	
	CONTINUOUS	sailco_regular		
83	sailco	extra	VARIABLE	
	CONTINUOUS	sailco_extra		

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84 sailco      |inventory                |VARIABLE  |
   CONTINUOUS|sailco_inventory
85 sailco      |ctCapacity               |CONSTRAINT|
   LINEAR    |sailco_ctCapacity
86 sailco      |ctBoat                   |CONSTRAINT|
   LINEAR    |sailco_ctBoat
87 sailco      |ctBoat_1                 |CONSTRAINT|
   LINEAR    |sailco_ctBoat_1
88 sailco      |totalCost                |OBJECTIVE |
   LINEAR    |sailco_totalCost
89 sailco      |ctCapacity_regular       |TERM      |
   LINEAR    |sailco_ctCapacity_regular
90 sailco      |ctBoat_regular           |TERM      |
   LINEAR    |sailco_ctBoat_regular
91 sailco      |ctBoat_extra             |TERM      |
   LINEAR    |sailco_ctBoat_extra
92 sailco      |ctBoat_inventory         |TERM      |
   LINEAR    |sailco_ctBoat_inventory
93 sailco      |ctBoat_lagged_inventory |TERM      |
   LINEAR    |sailco_ctBoat_lagged_inventory
94
95 **sailco_ctBoat**
96 Period|Row      |Sense|RHS
97 -----|-----|-----|----
98 2      |ctBoat_2|==    |60.0
99 3      |ctBoat_3|==    |72.0
100 4      |ctBoat_4|==    |25.0
101
102 **sailco_ctBoat_1**
103 period|Row      |Sense|RHS
104 -----|-----|-----|----
105 1      |ctBoat_1|==    |30.0
106 1      |ctBoat_1|==    |50.0
107 1      |ctBoat_1|==    |62.0
108 1      |ctBoat_1|==    |15.0
109
110 **sailco_ctBoat_extra**
111 Row      |Column |Coefficient

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112 -----|-----|-----
113 ctBoat_1|extra_1|1.0
114 ctBoat_2|extra_2|1.0
115 ctBoat_3|extra_3|1.0
116 ctBoat_4|extra_4|1.0
117
118 **sailco_ctBoat_inventory**
119 Row      |Column      |Coefficient
120 -----|-----|-----
121 ctBoat_1|inventory_1|-1.0
122 ctBoat_2|inventory_2|-1.0
123 ctBoat_3|inventory_3|-1.0
124 ctBoat_4|inventory_4|-1.0
125
126 **sailco_ctBoat_lagged_inventory**
127 CtBoat   |Column      |Coefficient
128 -----|-----|-----
129 ctBoat_2|inventory_1|1.0
130 ctBoat_3|inventory_2|1.0
131 ctBoat_4|inventory_3|1.0
132
133 **sailco_ctBoat_regular**
134 Row      |Column      |Coefficient
135 -----|-----|-----
136 ctBoat_1|regular_1|1.0
137 ctBoat_2|regular_2|1.0
138 ctBoat_3|regular_3|1.0
139 ctBoat_4|regular_4|1.0
140
141 **sailco_ctCapacity**
142 period|Row      |Sense|RHS
143 -----|-----|-----|-----
144 1      |ctCapacity_1|<=   |40.0
145 2      |ctCapacity_2|<=   |40.0
146 3      |ctCapacity_3|<=   |40.0
147 4      |ctCapacity_4|<=   |40.0
148
149 **sailco_ctCapacity_regular**

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150 Row          |Column      |Coefficient
151 -----|-----|-----
152 ctCapacity_1|regular_1|1.0
153 ctCapacity_2|regular_2|1.0
154 ctCapacity_3|regular_3|1.0
155 ctCapacity_4|regular_4|1.0
156
157 **sailco_demands**
158 period|demand
159 -----|-----
160 1      |40.0
161 2      |60.0
162 3      |72.0
163 4      |25.0
164
165 **sailco_extra**
166 period|Column |LowerBound|UpperBound|Objective|
    Value
167 -----|-----|-----|-----|-----|---
    --
168 1      |extra_1|0.0      |infinity  |450.0    |0.0
169 2      |extra_2|0.0      |infinity  |450.0    |0.0
170 3      |extra_3|0.0      |infinity  |450.0    |0.0
171 4      |extra_4|0.0      |infinity  |450.0    |0.0
172
173 **sailco_inventory**
174 period|Column      |LowerBound|UpperBound|Objective
    |Value
175 -----|-----|-----|-----|-----
    |-----
176 1      |inventory_1|0.0      |infinity  |450.0
    |0.0
177 2      |inventory_2|0.0      |infinity  |450.0
    |0.0

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178 3      |inventory_3|0.0      |infinity  |450.0
      |0.0
179 4      |inventory_4|0.0      |infinity  |450.0
      |0.0
180
181 **sailco_parameters**
182 name      |value
183 -----|-----
184 regularCost    |400.0
185 extraCost      |450.0
186 capacity       |40.0
187 initialInventory|10.0
188 inventoryCost   |20.0
189
190 **sailco_periods**
191 period
192 -----
193 1
194 2
195 3
196 4
197
198 **sailco_regular**
199 period|Column    |LowerBound|UpperBound|Objective|
      Value
200 -----|-----|-----|-----|-----|
      ----
201 1      |regular_1|0.0      |infinity  |400.0    |0
      .0
202 2      |regular_2|0.0      |infinity  |400.0    |0
      .0
203 3      |regular_3|0.0      |infinity  |400.0    |0
      .0
204 4      |regular_4|0.0      |infinity  |400.0    |0
      .0
205
206 **sailco_totalCost**
207 SUM( sailco_regular.objective * sailco_regular.

```



```
207 value + sailco_extra.objective * sailco_extra.  
    value + sailco_inventory.objective *  
    sailco_inventory.value )
```

```
208 -----  
    -----  
    -----  
    ----
```

```
209 0.0
```

```
210
```

```
211 **singletons_table**
```

```
212
```

```
213
```

```
214 Process finished with exit code 0
```

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215
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