```
1 C:\Users\AlanKing\Miniconda3\envs\MOSDEX-test\python.exe C:/Users/AlanKing/Documents/GitHub/coin-
   modeling-dev/mosdex-python/src/mosdex/generate_OSI.py
2 YES: Mosdex problem data\sailco_1-3.json is a valid instance of Mosdex schema data\MOSDEXSchemaV1-3-
4 **** Executing sailcoSolve ****
6 ***List the Tables***
8 **Modules**
                                    |class_name|type_name |table_name
9 module_name|item_name
                                     |-----
                                               TNPUT
11 sailco
             demands
                                    DATA
                                                          |sailco_demands
12 sailco
             parameters
                                     DATA
                                               INPUT
                                                          sailco_parameters
13 sailco
             regular
                                    VARIABLE
                                               |CONTINUOUS|sailco regular
                                               CONTINUOUS | sailco_extra
14 sailco
                                    VARIABLE
             lextra
15 sailco
             inventory
                                    |VARIABLE |CONTINUOUS|sailco_inventory
                                    |CONSTRAINT|LINEAR
16 sailco
             ctCapacity
                                                         |sailco_ctCapacity
             ctBoat
                                    |CONSTRAINT|LINEAR
                                                          |sailco ctBoat
17 sailco
                                    |CONSTRAINT|LINEAR
                                                          |sailco_ctBoat_1
18 sailco
             ctBoat_1
19 sailco
             |totalCost
                                    |OBJECTIVE |LINEAR
                                                          |sailco totalCost
20 sailco
             |ctCapacity_regular
                                    TERM
                                               LINEAR
                                                          |sailco_ctCapacity_regular
21 sailco
             ctBoat regular
                                     TERM
                                               LINEAR
                                                          |sailco ctBoat regular
                                     TERM
22 sailco
             ctBoat_extra
                                               LINEAR
                                                          |sailco_ctBoat_extra
23 sailco
             ctBoat inventory
                                    ITERM
                                               LINEAR
                                                          |sailco ctBoat inventory
24 sailco
             |ctBoat_lagged_inventory|TERM
                                               LINEAR
                                                          |sailco_ctBoat_lagged_inventory
25
26 **Metadata**
27 module_name|item_name
                                    |class name|name
                                                         type usage
                                                                                      |key_type
  source
  -----|-----|-----|-----|-----|-----|
                                                         |INTEGER|None
                                    DATA
                                               Periods
                                                                                      KEY
29 sailco
             demands
  None
             demands
                                    DATA
                                                         |DOUBLE |VALUE
30 sailco
                                               Demands
                                                                                      None
  None
                                               |Parameter |STRING |None
31 sailco
             parameters
                                    DATA
                                                                                      KEY
  None
32 sailco
             parameters
                                    DATA
                                               Value
                                                         DOUBLE VALUE
                                                                                      None
  None
             |regular
                                    |VARIABLE |Periods
                                                         |INTEGER|None
                                                                                      |FOREIGN KEY|
33 sailco
  sailco_demands_Periods
                                    |VARIABLE |Name
                                                         |STRING |None
                                                                                      |COL INDEX |
34 sailco
             regular
  None
                                    |VARIABLE |LowerBound|DOUBLE |LOWER_BOUND
35 sailco
             regular
                                                                                      None
  None
             regular
                                    |VARIABLE |UpperBound|DOUBLE |UPPER_BOUND
                                                                                      None
36 sailco
  None
                                    |VARIABLE |Objective | DOUBLE | OBJECTIVE_COEFFICIENT | FOREIGN_KEY |
37 sailco
             regular
  sailco_parameters_Parameter
38 sailco
                                    |VARIABLE |Value
                                                         |DOUBLE |VARIABLE_VALUE
                                                                                      None
             regular
  None
                                                         |INTEGER|None
                                                                                      |FOREIGN_KEY|
39 sailco
             extra
                                    |VARIABLE |Periods
  sailco demands Periods
40 sailco
             extra
                                    |VARIABLE |Name
                                                         |STRING |None
                                                                                      COL_INDEX |
  None
                                    |VARIABLE |LowerBound|DOUBLE |LOWER_BOUND
41 sailco
             extra
                                                                                      None
  None
                                    |VARIABLE |UpperBound|DOUBLE |UPPER_BOUND
42 sailco
             extra
                                                                                      None
  None
                                    |VARIABLE |Objective | DOUBLE | OBJECTIVE_COEFFICIENT | FOREIGN_KEY |
43 sailco
             lextra
  sailco_parameters.Parameter
                                    |VARIABLE |Value
                                                         |DOUBLE |VARIABLE_VALUE
44 sailco
             extra
                                                                                      None
  None
                                                         |INTEGER|None
45 sailco
             linventory
                                    |VARIABLE |Periods
                                                                                      |FOREIGN_KEY|
  sailco demands Periods
             |inventory
                                    |VARIABLE |Name
                                                         |STRING |None
                                                                                      COL_INDEX |
46 sailco
  None
47 sailco
                                    |VARIABLE |Inventory | DOUBLE | LOWER_BOUND
             |inventory
                                                                                      None
  None
```

File -	generate_	_osi								
48	sailco	None	inventory	VARIABLE	UpperBound	DOUBLE	UPPER_BOUND	None		
49	sailco			VARIABLE	Objective	DOUBLE	OBJECTIVE_COEFFICIENT	FOREIGN_KEY		
50	sailco		inventory	VARIABLE	Value	DOUBLE	VARIABLE_VALUE	None		
51	sailco			CONSTRAINT	Periods	INTEGER	None	FOREIGN_KEY		
52	sailco			CONSTRAINT	Name	STRING	None	COL_INDEX		
53	None sailco	 None		CONSTRAINT	Sense	STRING	SENSE	None		
54	sailco			CONSTRAINT	RHS	DOUBLE	RHS	FOREIGN_KEY		
55	sailco		ctCapacity	CONSTRAINT	Value	DOUBLE	CONSTRAINT_VALUE	None		
56	sailco		ctBoat	CONSTRAINT	Periods	INTEGER	None	FOREIGN_KEY		
57	sailco		nds_Periods ctBoat	CONSTRAINT	Name	STRING	None	ROW_INDEX		
58	None sailco			CONSTRAINT	Sense	STRING	SENSE	None		
59	sailco		ctBoat	CONSTRAINT	RHS	DOUBLE	RHS	FOREIGN_KEY		
60	sailco_ sailco		meters_Parameter ctBoat	CONSTRAINT	Value	DOUBLE	CONSTRAINT_VALUE	None		
61	sailco	None 		CONSTRAINT	Periods	INTEGER	None	FOREIGN_KEY		
62	sailco_ sailco		nds_Periods ctBoat_1	CONSTRAINT	Name	STRING	None	ROW_INDEX		
63	None sailco	ı	ctBoat_1	CONSTRAINT	Sense	STRING	SENSE	None		
64	sailco	None 		CONSTRAINT	RHS	DOUBLE	RHS	FOREIGN_KEY		
65	sailco_ sailco		meters_Parameter ctBoat_1	CONSTRAINT	Value	DOUBLE	CONSTRAINT_VALUE	None		
66	sailco	None 		OBJECTIVE	Value	DOUBLE	OBJECTIVE_VALUE	None		
67	sailco	None 		TERM	Name	STRING	None	ROW_INDEX		
68	None sailco			TERM	Name	STRING	None	COL_INDEX		
69	None sailco	ı	ctCapacity_regular	TERM	Value	DOUBLE	MATRIX_ENTRY	None		
70	 sailco	None		TERM	Name	STRING	_	ROW_INDEX		
	None		_ 0	TERM	Name	STRING		COL INDEX		
	None		_ 0		•		MATRIX_ENTRY	. –		
		None				•	_	None		
	sailco None					STRING		ROW_INDEX		
74	sailco None		_	TERM		STRING		COL_INDEX		
75	sailco	 None		TERM	Value	DOUBLE	MATRIX_ENTRY	None		
76	sailco None			TERM		STRING	None	ROW_INDEX		
77	sailco None	I	ctBoat_inventory	TERM	Name	STRING	None	COL_INDEX		
78	sailco	 None		TERM	Value	DOUBLE	MATRIX_ENTRY	None		
79	sailco None		ctBoat_lagged_inventory	TERM	Name	STRING	None	ROW_INDEX		
80	sailco None	I	ctBoat_lagged_inventory	TERM	Name	STRING	None	COL_INDEX		
81	sailco	 None	ctBoat_lagged_inventory	TERM	Value	DOUBLE	MATRIX_ENTRY	None		
82 83	· ·									
63	93 Tilinehelinelir Auttantes (Cotrillis)									

```
84 module variable
                                 |lower bound|upper bound|value|dual
                      type
85 -----
                      |CONTINUOUS | 0
86 sailco|regular_1
                                             infinity
                                                         |None |None
                      |CONTINUOUS | 0
87 sailco|regular_2
                                             infinity
                                                         None None
88 sailco regular_3
                      |CONTINUOUS | 0
                                             linfinity
                                                         |None |None
89 sailco|regular_4
                      |CONTINUOUS | 0
                                             infinity
                                                         None
                                                               None
90 sailco extra_1
                      |CONTINUOUS | 0
                                             infinity
                                                         |None |None
91 sailco extra_2
                      |CONTINUOUS | 0
                                             infinity
                                                         |None |None
92 sailco|extra_3
                      |CONTINUOUS | 0
                                                         |None |None
                                             infinity
93 sailco extra 4
                      |CONTINUOUS | 0
                                                         None
                                             infinity
                                                               None
94 sailco|inventory_1|CONTINUOUS|0
                                                         |None |None
                                             infinity
95 sailco|inventory_2|CONTINUOUS|0
                                             linfinity
                                                         |None |None
96 sailco|inventory_3|CONTINUOUS|0
                                             infinity
                                                         |None |None
97 sailco|inventory_4|CONTINUOUS|0
                                             infinity
                                                         |None |None
99 **Dependent Variables (Rows)**
100 module|variable
                     |type |lower_bound|upper_bound|value|dual
101 -----|-----|-----|-----|-----|-----|
102 sailco ctCapacity 1 LINEAR infinity
103 sailco ctCapacity_2 LINEAR infinity
                                          40
                                                      |None |None
                                                      |None |None
104 sailco|ctCapacity_3|LINEAR|infinity
                                          140
105 sailco|ctCapacity_4|LINEAR|infinity
                                          140
                                                      |None |None
106 sailco ctBoat 2
                       |LINEAR|60
                                          60
                                                      |None |None
107 sailco|ctBoat_3
                       |LINEAR|72
                                          172
                                                      |None |None
108 sailco ctBoat 4
                       |LINEAR|25
                                          125
                                                      |None |None
109 sailco|ctBoat_1
                       |LINEAR|30
                                          |30
                                                      |None |None
110 sailco OBJECTIVE | LINEAR | infinity
                                          infinity
                                                      |None |None
111
112 **Linear Expressions (Matrix Entries)**
113 Module Name | Name:1 | Coefficient
114 -----
115 sailco|ctCapacity_1|regular_1
                                   1.0
116 sailco|ctCapacity_2|regular_2
                                   11.0
117 sailco|ctCapacity_3|regular_3
                                   11.0
118 sailco|ctCapacity_4|regular_4
                                   1.0
119 sailco ctBoat_2
                       |regular_2
                                   11.0
120 sailco|ctBoat_2
                       |extra_2
                                   1.0
121 sailco ctBoat_2
                       |inventory_2|-1.0
122 sailco ctBoat_2
                       |inventory_1|1.0
123 sailco|ctBoat_3
                       |regular_3 |1.0
124 sailco ctBoat 3
                       extra 3
                                   1.0
                       inventory_3|-1.0
125 sailco|ctBoat_3
                       |inventory_2|1.0
126 sailco ctBoat 3
                       regular_4 |1.0
127 sailco|ctBoat_4
128 sailco ctBoat 4
                       lextra 4 | 1.0
129 sailco|ctBoat_4
                       |inventory_4|-1.0
130 sailco ctBoat 4
                       inventory_3|1.0
131 sailco ctBoat_1
                       |regular_1 |1.0
132 sailco ctBoat_1
                       extra_1 | 1.0
133 sailco|ctBoat_1
                       |inventory_1|-1.0
134
135 **KEYS**
136
137
        KFY:
                        sailco demands Periods
138
       DEPENDENCIES:
139
                        sailco regular
                                            (VARIABLE)
140
                        sailco_extra
                                            (VARIABLE)
141
                        sailco inventory
                                            (VARIABLE)
142
                        sailco_ctCapacity
                                            (CONSTRAINT)
143
                                            (CONSTRAINT)
                        sailco_ctBoat
144
                                            (CONSTRAINT)
                        sailco_ctBoat_1
145
146
        KEY:
                        sailco_parameters_Parameter
       DEPENDENCIES:
147
148
                        sailco regular
                                            (VARIABLE)
149
                        sailco inventory
                                            (VARIABLE)
150
                        sailco_ctCapacity
                                            (CONSTRAINT)
151
                        sailco_ctBoat
                                            (CONSTRAINT)
152
                                            (CONSTRAINT)
                        sailco_ctBoat_1
153
```

154 Process finished with exit code 0 155		
155		