

Lab 2

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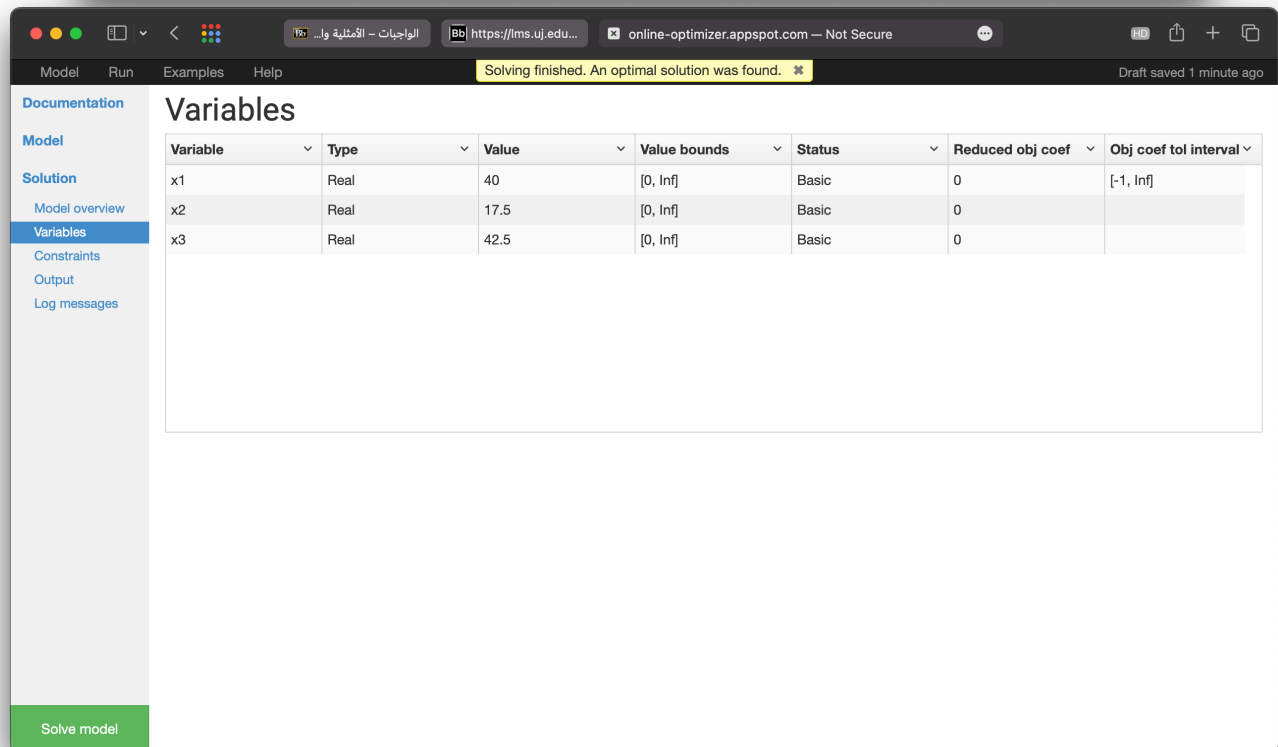
Part 1)



The screenshot shows the online optimizer interface with the model input. The left sidebar contains a menu with 'Documentation', 'Model', 'Solution', 'Model overview', 'Variables', 'Constraints', 'Output', and 'Log messages'. The main area displays the following code:

```
1 var x1 >= 0;  
2 var x2 >= 0;  
3 var x3 >= 0;  
4  
5 maximize obj: x1 + 2*x2 + 3*x3;  
6  
7 subject to c1: -x1 + x2 + x3 <= 20;  
8 subject to c2: x1 - 3*x2 + x3 <= 30;  
9 subject to c3: 0 <= x1 <= 40;  
10 subject to c4: x2 >= 0;  
11 subject to c5: x3 >= 0;  
12  
13 solve;  
14  
15 end;  
16
```

A yellow banner at the top right indicates 'Solving finished. An optimal solution was found.' and 'Draft saved 1 minute ago'. A green 'Solve model' button is at the bottom left.



The screenshot shows the online optimizer interface with the solution results. The left sidebar contains a menu with 'Documentation', 'Model', 'Solution', 'Model overview', 'Variables', 'Constraints', 'Output', and 'Log messages'. The main area displays the 'Variables' section with the following table:

Variable	Type	Value	Value bounds	Status	Reduced obj coef	Obj coef tol interval
x1	Real	40	[0, Inf]	Basic	0	[-1, Inf]
x2	Real	17.5	[0, Inf]	Basic	0	
x3	Real	42.5	[0, Inf]	Basic	0	

A yellow banner at the top right indicates 'Solving finished. An optimal solution was found.' and 'Draft saved 1 minute ago'. A green 'Solve model' button is at the bottom left.

Part 2)

Model Run Examples Help Solving finished. An optimal solution was found. Draft saved 1 minute ago

Documentation

Model

Solution

Model overview

Variables

Constraints

Output

Log messages

```
1 var x1 >= 0;
2 var x2 >= 0;
3 var x3 >= 0;
4 var x4 >= 0;
5
6 minimize obj: 4*x1 + 2*x2 + x3 + x4;
7
8 subject to c1: -x1 + x2 + x3 + x4 >= 30;
9 subject to c2: x1 - 3*x2 + x3 - x4 >= 28;
10
11 solve;
12
13 end;
14
```

Solve model

Model Run Examples Help Solving finished. An optimal solution was found. Draft saved 1 minute ago

Documentation

Model

Solution

Model overview

Variables

Constraints

Output

Log messages

Variables

Variable	Type	Value	Value bounds	Status	Reduced obj coef	Obj coef tol interval
x1	Real	0	[0, Inf]	At lower bound	5	[-1, Inf]
x2	Real	0	[0, Inf]	At lower bound	1	
x3	Real	29	[0, Inf]	Basic	0	
x4	Real	1	[0, Inf]	Basic	0	

Solve model