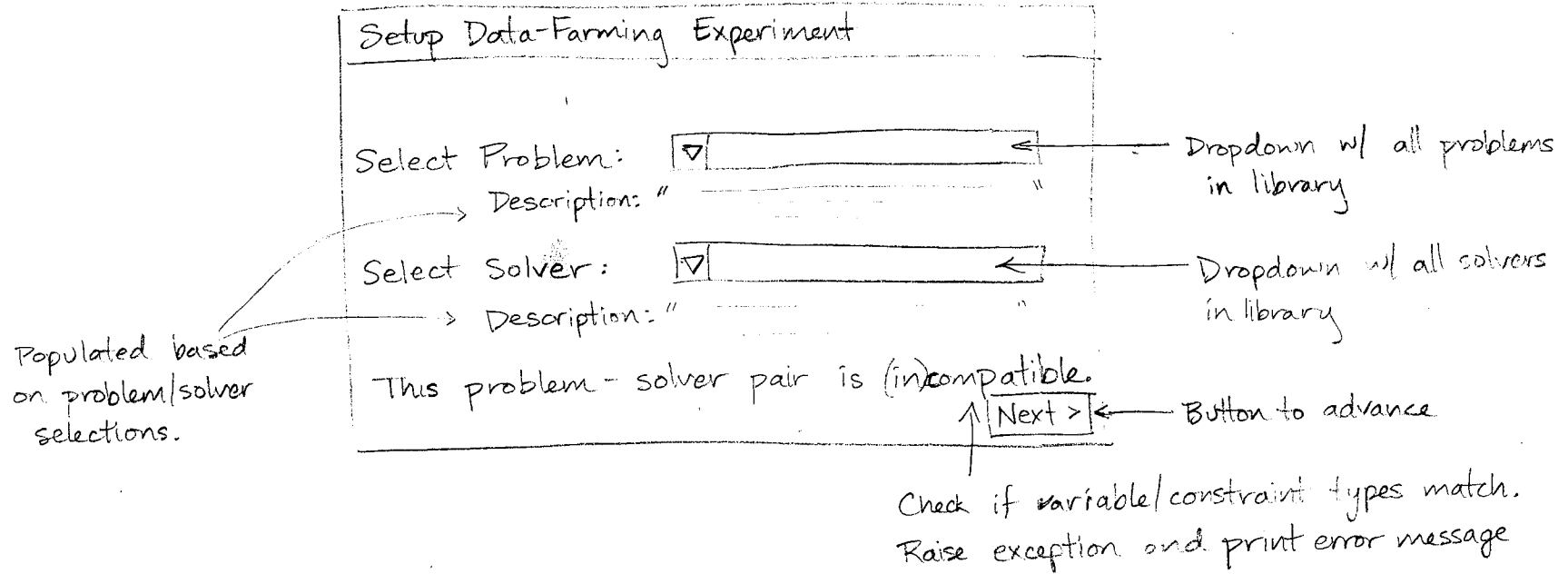


# SimOpt Data-Farming GUI



Maybe values in a row only appear if Include? box is checked.

Populated based  
on problem selection

Select Factors to Vary for AMBUSQ Problem								
Factor	Description	Include?	Type	Constraint	Default	Low	High	# Digits
nAmbulances	# of ambulances	<input checked="" type="checkbox"/>	Integer	Positive	3	<u>  </u>	<u>  </u>	0
$\lambda$	arrival rate	<input checked="" type="checkbox"/>	Scalar	Positive	1/60	<u>  </u>	<u>  </u>	<u>  </u>
$v_f$	fast ambulance speed	<input type="checkbox"/>						
$\vdots$	$\vdots$	$\vdots$						

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   denotes user inputs.

- \* Are negative integers allowed for # Digits?  
-1 means factor must be set to multiple of 10.

- \* How will Ruby code handle a degenerate factor?  
E.g., fixing nAmbulances to a non-default value 4.

For categorical factors (e.g. service discipline), Low/High are replaced by a checklist enumerating the possible values. ☒ FIFO ☒ LIFO

## Select Factors to Vary for STRONG Solver

Factor	Description	Include?	Type	Constraint	Default	Low	High	#Digits
$r$	sample size	<input checked="" type="checkbox"/>	Integer	Positive	30	<u>.</u>	<u>.</u>	0
$\Delta_0$	initial trust region radius	<input checked="" type="checkbox"/>	Scalar	Positive	0.1	<u>.</u>	<u>.</u>	<u>.</u>
:	:	:	:	:	:	:	:	:

Populated based  
on solver selection

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Choose a Design

Radio button → ☒ Cross

☐ Full

	Type	# Stacks
Problem	<input type="text"/>	.
Solver	<input type="text"/>	.
Problem + Solver	<input type="text"/>	.

Drop down with design types, e.g., NOLHS, full factorial.

Positive Integer

Summary:

# of Design Points	=	#	← Calculated by Ruby gem?
Estimated Time per Design Point	=	#	← Read from table of problem properties (oracle time x budget)
# of Macroreps per Design Point	=	#	
Estimated Total Run Time	=	#	← Multiple 3 #s above. Maybe account for # of processors

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Run

Run button executes the following:

- ① writes 3-column text files w/ factor specs for problem + solver
- ② If Cross, run Ruby (stack-nolhs.rb) on each text file, then run cross\_design on the outputs.  
If Full, merge text files and run Ruby (stack-nolhs.rb)
- ③ Design matrix stored in .csv file is read in.
- ④ In for loops, DOERunWrapper\_parallel is called to produce output files for each design point, or aggregate.