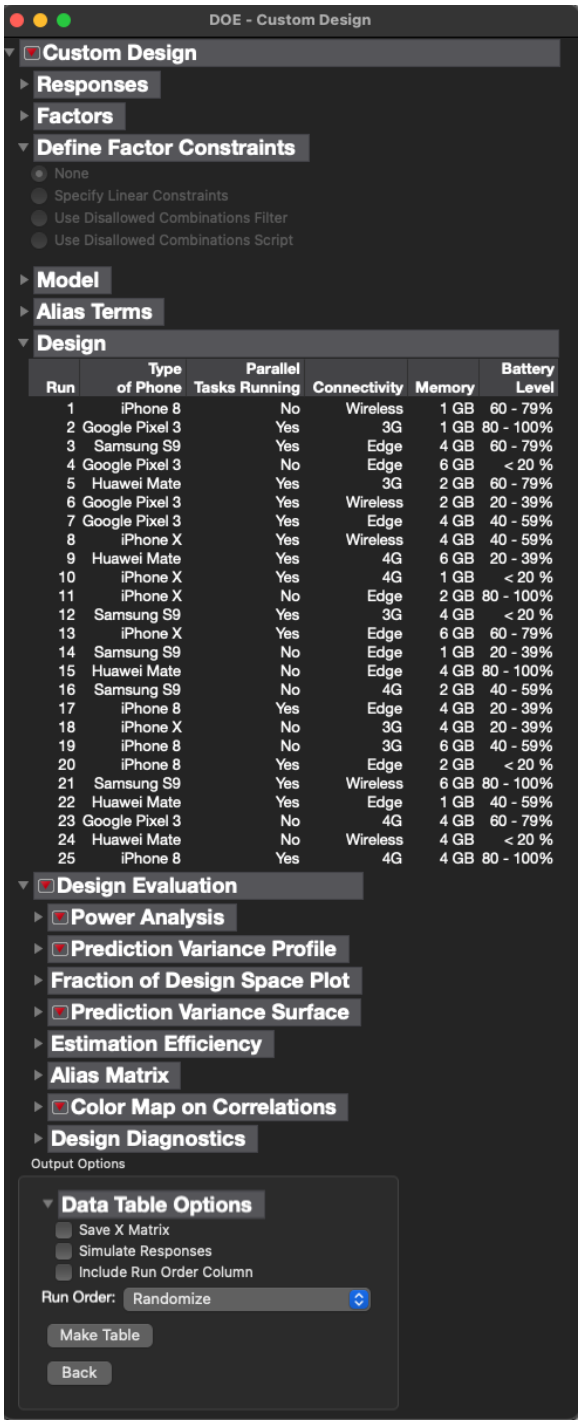
CSE-565_Project-1-Part-2---Specification-Based-Testing-Design-of-Experiments

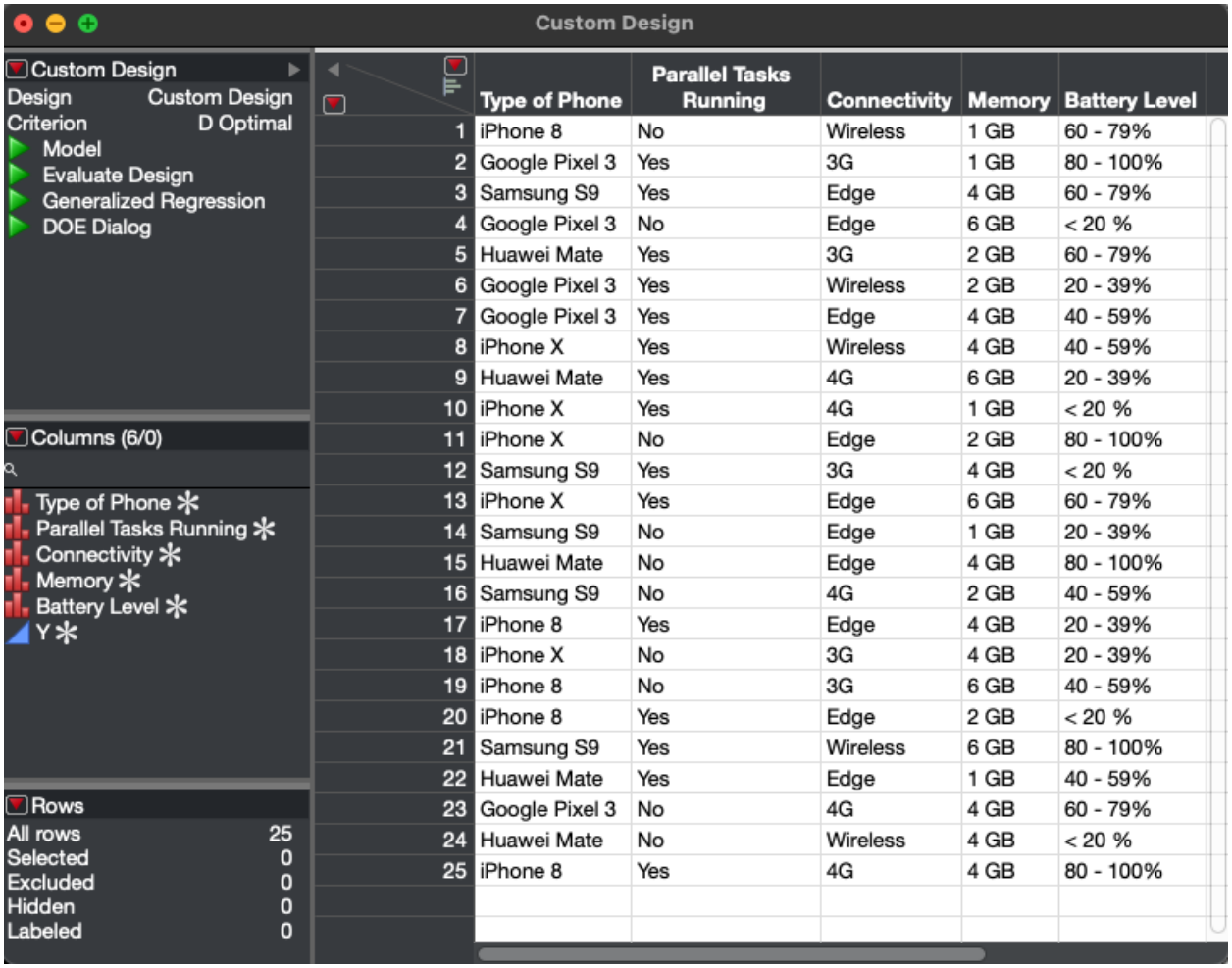
Yun Shing Lu

1. Explanation of the test cases
   For total 25 cases created by JMP, It achieves the reasonable coverage because It consists of all possible factor combinations in the test.

2.



Run	Type of Phone	Parallel Tasks Running	Connectivity	Memory	Battery Level
1	iPhone 8	No	Wireless	1 GB	60 - 79%
2	Google Pixel 3	Yes	3G	1 GB	80 - 100%
3	Samsung S9	Yes	Edge	4 GB	60 - 79%
4	Google Pixel 3	No	Edge	6 GB	< 20 %
5	Huawei Mate	Yes	3G	2 GB	60 - 79%
6	Google Pixel 3	Yes	Wireless	2 GB	20 - 39%
7	Google Pixel 3	Yes	Edge	4 GB	40 - 59%
8	iPhone X	Yes	Wireless	4 GB	40 - 59%
9	Huawei Mate	Yes	4G	6 GB	20 - 39%
10	iPhone X	Yes	4G	1 GB	< 20 %
11	iPhone X	No	Edge	2 GB	80 - 100%
12	Samsung S9	Yes	3G	4 GB	< 20 %
13	iPhone X	Yes	Edge	6 GB	60 - 79%
14	Samsung S9	No	Edge	1 GB	20 - 39%
15	Huawei Mate	No	Edge	4 GB	80 - 100%
16	Samsung S9	No	4G	2 GB	40 - 59%
17	iPhone 8	Yes	Edge	4 GB	20 - 39%
18	iPhone X	No	3G	4 GB	20 - 39%
19	iPhone 8	No	3G	6 GB	40 - 59%
20	iPhone 8	Yes	Edge	2 GB	< 20 %
21	Samsung S9	Yes	Wireless	6 GB	80 - 100%
22	Huawei Mate	Yes	Edge	1 GB	40 - 59%
23	Google Pixel 3	No	4G	4 GB	60 - 79%
24	Huawei Mate	No	Wireless	4 GB	< 20 %
25	iPhone 8	Yes	4G	4 GB	80 - 100%



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3. An assessment of the test cases

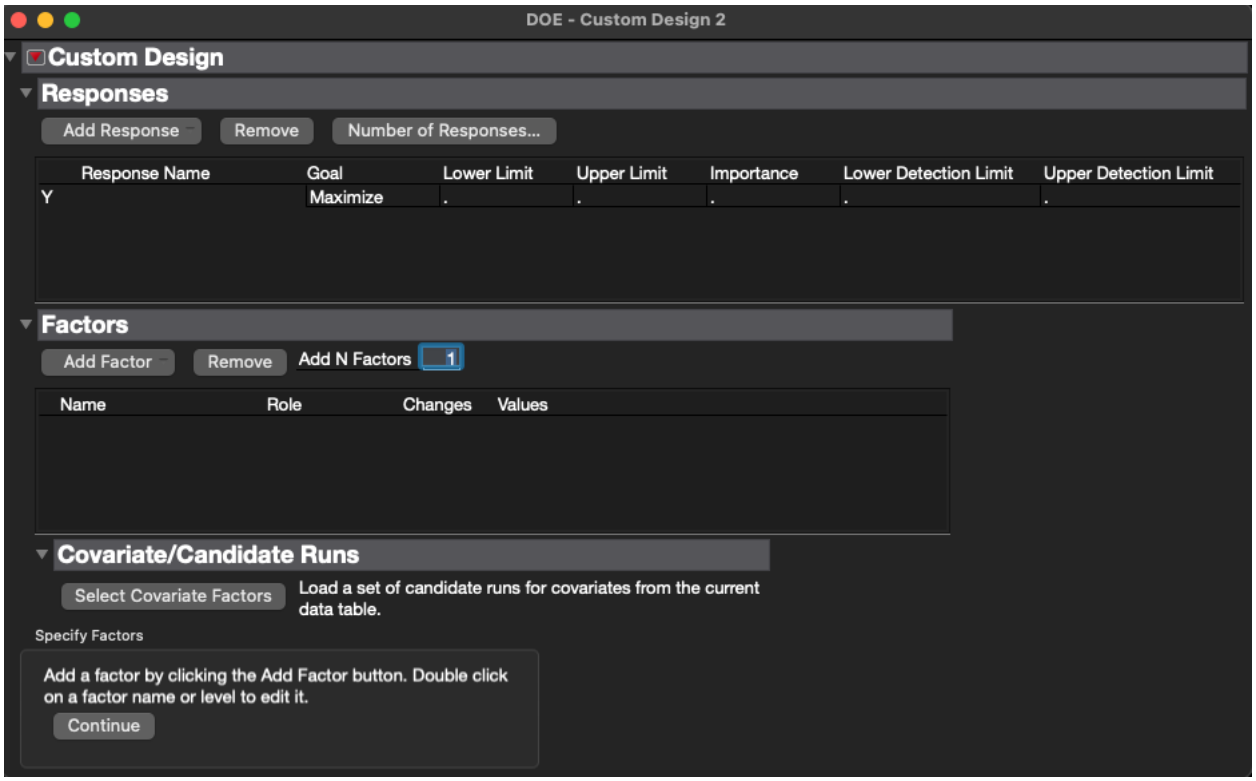
The maximum number of combinations (800 = 5*2*4*4*5) equally to 800. In this case, we use DOE Pairwise Combinations to create only 25 cases which achieve the reasonable code coverage. For total 25 cases, it consists of all possible factor combinations in the test and follows the guidelines of the DOE technique.

4. An assessment of the tool

In this report, I used JMP to create the test cases. JMP is a statistic software and very easy to get started.

JMP can easily solve the most complex data challenges. It is widely used in various industries and businesses if only anyone has big data solution needs

For this project, I just easily open JMP and choose DOE-Custom Design. Then I can input the parameters and quickly generate test cases.



In addition, JMP is also easy install and setup. I just download it from ASU app page but you can also download it from the official website. It provided licensed and free trial version.

https://www.jmp.com/zh_tw/home.html