Design model and result analysis. Design model exercise- 1. Identify a question about your IDP project that can be solved with a design model. 2. Develop a simple model of the system, component, or behavior that you wish to study using Excel, Python, Solidworks, or any other software package that you are comfortable with and feel is relevant. 3. Develop a small experiment that attempts to answer the question you are focusing on using your model. This experiment should systematically vary input parameters to your model in order to determine an appropriate configuration, part dimension(s), or component selection(s) that will help your design to perform as required or achieve a stated objective. 4. Run your experiment and draw a conclusion about the question you are focused on. Refer to the design model exercise(pdf file attached) for more information and follow the rubrics there. A sample design model exercise file is attached but take note it is a different design model but you should follow that format. I encourage you to use excel for plotting the graph. The design model is a track ramp to lift a tent box(maximum weight= 200lbs) up to the car roof with the sketch attached(docx file). I suggest plotting a force(y-axis) and angle of the ramp relative to the ground(x-axis)(F=ma)graph because there is a maximum force the person can exert and it is less than 20lb. Determine the angle to meet that requirement by plotting with different angles(0-90 degrees). The force is the output and the angle is the input. So, the question of the design model could be" i want to know the angle of the ramp relative to the ground to meet a force of less than 20lb(the constraint)" an example. feel free to change the sentence. The force and acceleration should be constant. Weight and kinetic friction are constant. Refer to the problem statement draft where it defines the problem(Aluminium folding docx file attached). Submit the excel spreadsheet file where you plot the graph(model) and the summary(docx file). Result analysis- write a 1-3 page paper that presents the results obtained in your modeling exercise (2890 Design Model Exercise) in such a way that a supervisor, who has very little direct understanding of you project, can understand the context of the model you developed, the results obtained, and correct action to take based on the question you tried to answer. You can (and should) start with your submission for the design model exercise, but the focus here is on telling a complete, technical, story about your model. Your paper should tell a focused and clear story about your model, and should do the following, and a liberal use of visual aides and equations is advised: 1. Present the design question you focused on (and why it is important to your design problem) 2. Present the details of how your model works (science, equation(s), etc.) 3. Detail the results obtained in your modeling study 4. Suggest a course of action to take based on the results obtained. Refer to the result analysis paper(pdf file attached) for more information and follow the rubric there. The paper should be written in accordance with the Document formatting Guidelines(pdf file attached)