1. David Tchakote Happy

P: if the file system is locked

Q: the new messages will be queued

R: the system is functioning normally

S: will be sent to the message buffer

“If the file system is not locked, then the new messages will be queued”

~pq

“if the file system is not locked, then the system is functioning normally and conversely”

~p<-->r

“if new messages are not queued, then they will be sent to the message buffer”

~qs

“If the file system is not locked, then the new message will be sent to the message buffer”

~ps

“new messages will not be sent to the message buffer”

~s

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| p | q | r | s | ~pq | ~p<-->r | ~qs | ~ps | ~s |
| T | T | T | T | T | F | T | T | F |
| T | T | T | F | T | F | T | T | T |
| T | T | F | T | T | T | T | T | F |
| T | T | F | F | T | T | T | T | T |
| T | F | T | T | T | F | T | T | F |
| T | F | T | F | T | F | F | T | T |
| T | F | F | T | T | T | T | T | F |
| T | F | F | F | T | T | F | T | T |
| F | T | T | T | T | T | T | T | F |
| F | T | T | F | T | T | T | F | T |
| F | T | F | T | T | F | T | T | F |
| F | T | F | F | T | F | T | F | T |
| F | F | T | T | F | T | T | T | F |
| F | F | T | F | F | T | F | F | T |
| F | F | F | T | F | F | T | T | F |
| F | F | F | F | F | F | F | F | T |

Answer:

Since there is at least 1 row where all the specs are true that means the system specs are consistent.

Paragraph:

For me the problem was hard and confusing because I did not know if I had to put “and conversely” as a variable or no, but I went in the example we did in class, and it really helped me understand what I should assign a variable to. In the example we did, there was something similar to “and conversely” and we did not use it as a variable, so I did the same with this assignment. This problem was really confusing because there were a lot of variables and so a lot of rows. I had to make sure not to use the wrong variable with another one for example using ~q and r instead of ~q and s for the ~q->s otherwise I would have to restart.

PEA paragraph:

Throughout this semester I learned a lot of different subjects in my math for computer science class. With the semester coming to an end, I can say that the topic that I liked the most was Boolean algebra. With Boolean algebra, you analyze data to be able to find a concrete conclusion which helps you make better decisions on what to do and that can be useful for various things. Therefore, I decided to show how useful it can be by writing my PEA assessment about it. There are a lot of jobs in the computer science field that uses Boolean algebra. The one I liked the most is known as Data Analyst. I chose Data Analyst because as a Data Analyst, you must analyze data and Boolean algebra and logic are tools that helps analyze data. Data analysts go through the process of inspecting, cleansing, transforming, and modeling data with the goal of discovering useful information, informing conclusions, and supporting decision-making. The link between Boolean algebra and a data analyst is that in data analysis True or False values are often encoded as 1 or 0 for the computer software they use, so the calculations that use Boolean data are very quick and efficient. Computing is based on 1 and 0 so, Boolean data is easily processed by a computer. For example, to be able to succeed in the process of cleansing data, a data analyst will do Boolean test using properties of logic that will return true or false values allowing them to decide how to progress with the data. The reference sites that I used to help me find the job of Data Analyst is https://www.dice.com/jobs/detail/412314c03d5883362c9298d48f8909f8?searchlink=search%2F%3Fq% 3DBoolean%2520algebra%26countryCode%3DUS%26radius%3D30%26radiusUnit%3Dmi%26page%3D1 %26pageSize%3D10%26language%3Den%26eid%3DS2Q\_%2CAQ\_3&searchId=9cff487e-8eb1-4053- bb94-6ad6c3f5eb02 and the sites that I used to help me gather information on the job of data analyst to write this PEA assessment are <https://en.wikipedia.org/wiki/Data_analysis> and https://www.preppindata.com/howto/how-to-deal-with-boolean-data