Reflection 2
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Reflection on *The Empty Set*.

First of all, speaking of definition, an empty set is a set that is empty. The empty set is a subset of all sets, meaning every elements within the empty set is also an element of all other sets. At this point, I tried understanding the idea as in since an empty set is just a set of blank spaces there would definitely be blank spaces within all other sets that ever exists. To talk more in dept and exact, an empty set possess the property of another set unless there is a statement that the property does not possess the property of another set. So the only way for it to fail is if you could find the element in the set that does not possess that property.

For better understanding we could think about using some examples. The one I found most helpful was the one our Professor went over during one of his lectures. Imagine being involved in a club around a bunch of people, and the president of a student club says, "All members with brown hair wear a beanie." But also suppose that there are no members with brown hair in the club. In this case, you could think of it as if the set of brown haired club members is empty. Now if you think about if this statement is true, false, or neither, you might be thinking like "Oh since there are no club members that have brown hair, it must be false" but it is actually true. The property not possessing the property of another set could not be found in this example, for example, a brown haired club member that is not wearing a beanie. This could be a lot of information to take at once, but a easier way of thinking is that the statement "All members with brown hair wear beanie." is not false just because there are no club members that have brown hair. But it's true because there aren't any opposing statements to prove that it is false.

Finalizing ideas, you have to say that every property holds true for the empty set. Because the only way to fail is if you could find the element in the set that did not possess that property. But logically thinking you cannot, since it is the empty set.