25, Protégé 6 months, master student, in Chinese

(M)

00:38 ok, very confused, why Thing subclass of and is followed by this, this is not Manchester syntax, right?

I: this is Protege statement

Subclass of, is member

I: you can look at diagrams, if you don’t understand, you can turn to diagrams for help

Ok

02:07 emm, individual, first these two (first two diagrams), is member of robot, and is member of human team, so, emm, these two (human team and alien team) shouldn’t be disjoint, right?

I: yes

02:35 it seems errors (means the cause of incoherence) are all like this (caused by disjointness). Just talk like this?

I: yea, the causes could be vary, sometimes it’s like this, sometimes there are other options

02:56 unsatisfiable, (murmur), this superpower, the device and superpower should be overlapping, that is, let me have a look which one is subclass and which one is supclass, ok, am I doing too slow?

I: no, as normal

From this, how can I recognize which is subclass, and which is supclass? (superpower in the first diagram, and god device in the second diagram), it can only be inferred that these two are intersected, but cannot say which is subclass and which is supclass

I: emm, in fact, it should be

Superpower is

I: yea, they are intersected, not in a subclass relation, they are intersected

05:32 I: (giving a new one) it’s ok, you are doing well, you pointed out each time where it is incorrect

05:51 has base in is base of (murmur) has base in, ah this, inverse is has base in, emm, ok, is base of, ah, em, aeroboat should be a subclass of cave, right? These two cannot be disjoint

06:43 I: do you have any other thoughts?

Ok

I: because you said cave should be in aeroboat

No, aeroboat should be, emm, should be a subclass of cave, yea? Because it must be in cave due to the relation has base in, but here, bear, so aeroboat should be in one of this, aeroboat is a subclass of cave

I: yea, ok

07:18 I: (giving a new one)

07:30 (murmur) domain, domain is,

I: you can treat this like a dictionary, if you are not sure about anything, you can look up here

Emm, is owned by the, domain is info centre, why the arrow is pointing to armory?

I: this one (pointing to the domain in the diagram), the one below is domain, that is, if there is a box, this (pointing to the dash arrow in the diagram) one is at least one

At least one, at least one, but if it is at least one, then it cannot be inside the domain?

I: it should be inside the domain, but it doesn’t, so there is a problem

Yes, so this property is wrong, pointing incorrectly

I: so that should be?

Is owned by should be info centre, its domain should be info centre, and this, R&D centre, and this R&D centre should be a subclass of info centre, right?

I: haha, in this way, you changed the whole ontology

Ok, if we don’t fix like that, delete disjointness, is owned by, ah, is owned by domain information, we could also change this, change and delete the domain,

I: yea, deleting the domain is a solution

Yea, deleting the domain

10:45 I: ok, (giving a new one)

11:03 (murmur) emm, in costumed, (the cardinality) equals 5, and in secret team, (the cardinality) should be greater and equal to 5

11:30 I: em, right. You are getting better and better, we finished half of the study, (giving a new one), GW is girl with

11:43 ah ok, these two (curves in the diagram) cannot have the same name, but they are treated separately (means curves with the same name are disjoint), it’s incorrect,

I: how would you fix it?

Delete this (pointing to the left hand side of the diagram)

I: delete which one?

Delete the left hand side, because it is the same as the right hand side, the same subclasses, deleting it would work

12:18 I: em, (giving a new one)

12:53 the range of absorbs is in two separate position, and then, this should be, to fix it, to fix it, how to fix it? Here? set fire be a subclass of heat, and then, set fire is subclass of heat,

13:34 I: ok, this is the last one, it’s very complicated, emm, please try your best, it doesn’t matter if you cannot have a solution, since many people said there was no solution, but in fact, we cannot represent the first axiom using concept diagram directly, so I represent its equivalent axiom, making it more complex, and plus this grey area, so it is not an one-to-one correspondence, but if you understand this diagram, could you please show me your solution, as we want to know whether or not the concept diagrams can help people to understand ontologies

14:11 ok, people is deleted, right? This (the arrow in the diagram) points to an empty set

I: it’s not all empty, it points to this little circle (pointing to the unlabelled curve inside villain at the diagram), and this little circle includes this one (pointing to the part of people inside the unlabelled curve at the diagram) and this one (pointing to the part of others inside the unlabelled curve at the diagram)

Ah, yes, but this little circle, what this little circle represents is incorrect, why, this little circle, it’s incorrect with the representation of this little circle, it’s impossible that a class has two classes which are disjoint, is it possible?

I: yea, it is possible. It is true that something wrong with the little circle, the little circle is a subclass of the large circle (means the villain), but the large circle is too big

It’s a subclass of the large circle, and the large circle is too big

I: because the large circle is the universe

Then, the situation inside this little circle

I: that is, either is this one, or this one

Or, emm, yes, we can use or, (murmur), only this one steals, unsatisfiable, how would fix this one?

I: change this only to some, because the arrow points to this little circle, and then the large circle, outside the little circle, only include these two things (pointing to people and others), there is nothing else, so it equals that the large circle is the universe, if the large circle is the universe which is disjoint with wood, there is a problem

But these two (means villain and wood) are two different classes

I: although these two are different, the large circle represents the universe, the universe contains everything, it’s the Thing, everything should be inside Thing, but in this diagram, the Thing is equivalent to villains

But only teleportation move things, so things should be at the right hand side

I: no, Thing is a box,

Yea, I think things is this box

I: every box is called Thing

Yea, I still don’t understand why this large circle turned out to be the universe

I: like this (pointing to the shading pattern in training materials), means everything is a scenario, so it equals to everything is villain,

I still don’t understand this assumption, it can’t be understood as this is a class, this is a class, and they are disjoint

I: yes, that’s the situation, but because of the grey area, there is nothing inside grey area, so villain is equivalent to people and others, and that is Thing

And this Thing is everything, so you defined everything?

I: when we open a new file in Protege, there is nothing inside, the only thing is the Thing, all classes and properties you define must be inside the Thing

Ah, oh

I: and now it suddenly has something that are not inside Thing, then it’s a problem

Oh, that’s what it means, yea

20:36 Different. Usually when using Protege, it will give a hint where are incorrect. This way is more intuitive, especially for those problems that are not easily detectable. It will be fine if one becomes skilled and knows well on concept diagrams, but at the beginning it could be confused.

21:36 I don’t have a fixed approach to debug. First understand (the justifications) and check whether there is any problem

22:30 Very nice, have a new method for debugging, a better understanding compared to textual (representation), more intuitive.

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| **Task id by unsatisfiable** | **Solutions** |  |
| **(Mul)** Thunder | Change axiom 4 : SuperPower DisjointWith Device | R |
| **(Mul)** Costumed, Iceman | change 4 to 5 | R |
| **(Mer)** GWMultiPower, GWSuperSenses | Delete left hand side diagrams | R |
| **(Mer)** Wood | No solution | R |
| **(Mer)** absorbs | Change Fire SubClassOf Heat | R |
| **(Mul)** Aeroboat | Change axiom 4 to Aeroboat SubClassOf Cave | R |
| **(Mul)** isMemberOf | Delete axiom 5: HumanTeam DisjointWith AlienTeam | R |
| **(Mer)** Cache | (1) delete axiom 5: RnDCentre SubClassOf InfoCentre  (2) delete axiom 1: isOwnedBy Domain InfoCentre | R |