Re: Making money from Java

Source: http://coding.derkeiler.com/Archive/Cobol/comp.lang.cobol/2005−12/msg01002.html

- *From*: "Oliver Wong" <owong@xxxxxxxxxxxxxx>
- *Date*: Thu, 15 Dec 2005 20:07:35 GMT

<docdwarf@xxxxxxxxx> wrote in message news:dnqo50$iq3$1@xxxxxxxxxxxxxxxxxxxx
> In article <Jk_nf.256568$ir4.37132@edtnps90>,
> Oliver Wong <owong@xxxxxxxxxxxxxx> wrote:
>
> [snip]
>
>>For example, we have a whole system of geometry
>>called "Euclidean geometry" that, for example, tells us (among other
>>things)
>>that the sum of all the angles in a triangle is 180 degrees.
>
> With all due respect, Mr Wong, the Euclid I studied (Heath edition) made
> no mention of degrees... it may be that somewhere in the Geometry it is
> concluded that the sum of the angles of a triangle is equal to the sum of
> two right angles but that is, I believe, a proposition which is
> demonstrated.

Euclid contributed an axiomatic system which we now call "Euclidean
geometry". Not sure if Euclid himself mentions what the angles in a triangle
add up to in his text, but it IS using his system that we have derived the
above fact.

>
>>Euclidean
>>geometry is based on 5 assumptions (which I won't list here, you can look
>>it
>>up if you don't know and are interested), and the "angle in triangle adds
>>up
>>to 180" statement is only true IF you accept those 5 assumptions.
>
> Ummmm... the Euclid I studied (Heath edition) began with Definitions,
> Postulates and Common Notions. Definitions were things like 'a point is
> that which has no part' and 'a line is breadthless length'... there were a
> whole bunch of these, more than five.
>
> Five was the number of Postulates, which included things like 'to draw a
> straight point between two lines' and 'to produce (continue) a straight
> line continuously in a straight line'... and the Fifth Postulate was the

> Parallel Postulate.

Yes, it sounds like what you are calling "Postulates", I would (in a more rigorous context) called "axioms". I believe axioms can be further subdivided into "assumptions" and "tautologies". Tautologies are those statements which are true by their own definition, and I figured none of the Euclid's five "postulates" falls under that category (though I don't actually remember all five of them), so I called them assumptions.

> [snip]
>
>>Euclide had those 5
>>assumptions for his system which he hoped were sufficiently obvious, and
>>for
>>a long time they were. But recently people have been looking at his
>>assumption about parallel lines and wondered if it was nescessarily true.
>>They removed that assumption and derived a new set of rules to form set of
>>a
>>system collectively referred to as "Non−Euclidean geometry". Not sure, but
>>I
>>believe the most popular non−euclidean geometry is Lobachevskian geometry,
>>and it is now believed that on the macroscopic scale (e.g. the size of the
>>universe), our space−time conforms more closely with Lobachevskian
>>geometry
>>than Euclidean geometry. In other words, it turns out that the angles of a
>>triangle don't really add up to 180 degrees in "real life".
>
> Hmmmmm... in another posting I referred to Popper's theories from the
> 1930s as 'barely a century old'... Lobachevski put together/plagiarised
> his work in the early−mid 19th century... nice to see that called
> 'recent'.

Recent in the context of geometry and mathematics, anyway. What time frames may considered recent when dealing with, for example, computer programming paradigm, versus when dealing with the formation of galaxies, may differ significantly.

>
> (And... my memory is, admittedly, porous but I recall that if one attempts
> to conctruct a geometry on the surface of a hypersphere then the Parallel
> Postulate holds... but that's for another time, perhaps.)

In Euclidean geometry, the parallel line postulate says (or is equivalent to):

Given a line L and a point P which is not on L, there exist exactly one line which crosses P but which does not cross L. This line is said to be "parallel" to L.

In spherical geometry, there does NOT exist any such line, and in hyperbolic (or Lobachevskian) geometry, there exists infinitely many such

lines.

>> Instead, Euclides start with assumptions like "Assume any two points
>> can
>>be joined by a straight line". These assumptions were so "obvious" to the
>>audience that they accepted them without question. And FROM these
>>assumptions, Euclide derived the rest of geometry.
>
> Not as I recall it... first Definitions, then Postulates, then Common
> Notions, *then* Propositions. But... enough about my memory. Consider
> http://aleph0.clarku.edu/~djoyce/java/elements/bookI/bookI.html .

Yes, I may have been "skipping a few steps". =)

− Oliver

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