Exercises for the 'Inompleteness-Part' of L&C

Exercise I1:

Referring to the Gödelian Puzzle on slide 4: name an unprintable true statement, other than $\neg PN(\neg PN)$. You may use the assumption that printable strings cannot contain non-printable substrings. Explain your solution!

Exercise I2:

Prove Theorem GI (on slide 14).

Exercise I3:

Let $R = \{\ulcorner S \urcorner \mid S \in \mathcal{R}\}$. Show that if Σ is consistent and $(R)^*$ is representable (not just expressible!) then Σ is Gödel-incomplete.

Submission of solutions to these exercises: – Deadline: January 7, 2013

– Send as PDF to `chrisf@logic.at` (preferably all solutions in one file!)

– Use subject line: "L&C exercises"

– Include your name and MatrikelNmr. in the PDF

– resend/inquire, if you don't receive an acknowledment within 3 days