

Assignment 3

Submit exactly 3 Isabelle files as follows.

1)

Prove the following formulas in MiniCalc:

$$\neg q \longrightarrow (p \longrightarrow q) \longrightarrow \neg p$$

$$(p \longrightarrow q) \longrightarrow \neg q \longrightarrow \neg p$$

Use "Copy Result to Clipboard" as the proof.

Multiple formulas can be proved in MiniCalc using the style in the files MiniCalc_Exercises_1.thy and MiniCalc_Exercises_1_Solutions.thy given in DTU Learn.

Make sure that the "theory" command imports MiniCalc and remember the "end" command at the end.

Also make sure that Isabelle processes the whole file without errors.

Do not submit files like MainProof.thy or MiniCalc.thy given in DTU Learn.

2)

Prove the formulas listed above in 1) in Pure_I using the style in the files Pure_I_Exercises.thy and Pure_I_Exercises_Solutions.thy given in DTU Learn.

Make sure that the "theory" command imports Pure_I and remember the "end" command at the end.

Also make sure that Isabelle processes the whole file without errors.

Do not submit files like Pure_I.thy given in DTU Learn.

3)

Solve exercise 2.10, exercise 2.11, exercise 3.3 and exercise 3.4 in the "Programming and Proving in Isabelle/HOL" tutorial.

Please try to keep each line shorter than 100 characters.

Make sure that the "theory" command imports Main and remember the "end" command at the end.

Also make sure that Isabelle processes the whole file without errors.