Written Exam
Compiler Construction

(Summer 2021)

Dr. Arnd Hartmanns

26 May 2021

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Name

_____

Student number   Seat

Do not open this exam booklet before we ask you to. **Do** read this page carefully.

You can only write the exam at the seat allocated for you, and you must use the exam booklet that carries your name and student number.

This is a closed-book exam. Leave bags and jackets out of reach. Turn off any electronic devices and leave them with your bag. You may only take writing utensils, drinks, food, and your student or identity card to your seat. Please have your student or identity card clearly visible on your table.

Leaving the room without handing in your exam booklet is regarded as an attempt of deception. You may not leave the room during the first 30 minutes and the last 15 minutes of the exam. If you need to use the restrooms, please hand your exam booklet to the supervisor. Only one person at a time may leave for the restroom.

Before you start, please check that your exam booklet consists of **10 pages**, sequentially numbered, on 10 sheets of paper, and contains exercises 1 through 5 d). This is page 1.

Write your solutions on the (printed) right pages of the exam booklet, in the space provided below the respective questions. Solutions written in a different language than English, in red or similar colours, on the first or last page of the booklet, on the (blank) left pages, or on additional sheets not referenced from the booklet, **will not be graded**. Should you run out of space, ask the supervisor for an additional sheet of paper. You may use a pencil.

The duration of the exam is **90 minutes**. The total number of points of the exercises in this exam is 90. 45 points will be sufficient to pass the exam.

Have fun!

1	2	3	4	5		Sum
12	20	27	16	15		90

Question 1. True or False? (12 points)

For each of the following statements, decide whether it is true or false. If a statement is false, <u>very briefly</u> (i.e. in at most one sentence) correct it or explain why it is false.

a) The CC written exam takes place on 26 May 2022.

    1 False.
    1 It takes place on 26 May <u>2021</u>.

b) Answers written on the blank left pages of the exam booklet will be graded.

    1 False.
    1 They will <u>not</u> be graded.

c) An interpreter takes an arbitrary program in a source language and executes it.

    2 True.

d) The second phase in a typical compiler's front end is scanning.

    1 False.
    1 It is parsing. **or:** Scanning is the first phase.

e) Java array types are constructed types.

    2 True.

f) ILOC is three-address code.

    2 True.