

University of Waterloo
CS116 – Waterloo
Final Examination

Term: Winter Year: 2014

Please print

Date: Monday, April 14, 2014
Time: 9:00 – 11:30 am (150 minutes)
Instructors: L. Case, E. Dupont, K. Harrigan,
T. Kou, J.P. Pretti
Lecture Section: 001-005
Exam Type: Closed book
Additional Materials Allowed: Reference Sheet

Last Name: _____

First Name: _____

ID: _____

Signature (in ink): _____

Instructions: (Read carefully before the exam begins):

1. Before you begin, make certain that you have one Exam Booklet with 12 pages and a Reference Sheet.
2. The Scheme language level is Advanced Student Scheme.
3. See the Reference Sheet for information about useful Scheme and Python language features. You may also use language features not listed on the Reference Sheet. However, no additional information about Scheme or Python will be provided.
4. Supply exactly the parts of the design recipe requested in each question.
5. Follow the CS116 style guidelines for your solutions.
6. Unless otherwise indicated, you may use a helper function where you feel it is needed. In Scheme, be sure to use `local` and `lambda` as appropriate. In Python you may use `lambda` or a separately defined helper function. For each helper function, you are only required to write the function definition (header and body).
7. Unless stated otherwise, a function should not mutate what it consumes.
8. All solutions must be placed in this booklet.
9. If you need more space to complete an answer, you may be writing too much. However, if you need extra space, use the extra blank pages at the end of the exam clearly labeling the question and indicate that you have done so in the original question.
10. Read each question carefully to determine if a specific approach must be taken and/or some restrictions apply. (For example, whether or not abstract list functions, recursion, or iteration are allowed.)

Question	Marks Given	Out Of	Marker's Initials
1		5	
2		17	
3a		7	
3b		5	
4		6	
5		7	
6		6	
7		6	
8		7	
9		4	
Total		70	



Examination
Final
Winter 2014
CS 116

Closed Book

Candidates may bring no aids (no calculators).

Please print in pen:

Waterloo Student ID Number:

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WatIAM/Quest Login Userid:

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Times: Monday 2014-04-14 at 09:00 to 11:30

Duration: 2 hours 30 minutes (150 minutes)

Exam ID: 2713675

Sections: CS 116 LEC 001,002,003,004,005

Instructors: Edward Dupont, John-Paul C Pretti, Kevin
Harrigan, Lori M Case, Tian Kou

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Please initial:

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CS 116 LEC 001

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G. Gavin
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