

# 60–100 Individual Assignment #1

## To be submitted at the lectures on Tuesday 16th September

### 1. Activate your university of Windsor computer account:

1.1 Use the web page “[www.uwindsor.ca/userid](http://www.uwindsor.ca/userid)” to activate your computer account. If you have a problem, go to the Information Technology Services Centre and ask for help at the help desk.

1.2 Go to the CS labs on the third floor of Erie Hall to check to make sure your account is activated on the Computer Science servers. If not, see one of the CS technicians. The labs. should be open from 9am to 9pm from Monday 8<sup>th</sup> September. Note that the labs are not open at the weekend. However, you can use the PCs in the basement of IT service to access the servers. Alternatively, you can use the SSH software from your PC. See the 60-100 web page for instructions.

### 2. Use the instructions on the 03-60–100 web page (the URL is on the course notes) to learn how to create and run Miranda programs (help will also be given at the 60–100 labs on Thurs/Friday 11/12th September.) Write Miranda programs to do the following. You should test your programs by running them on one of the compute servers (see 60–100 web page):

A program called p1 which takes no input but outputs your age

A program called p2 which takes no input but outputs your full name

A program p3 which takes a number as input and returns the number doubled

A program called p4 which takes two numbers and returns the largest number

A program called p5 which takes a list of numbers and returns the list with all numbers doubled

A program called p6 which takes a list and returns the first number in the list

A program called p7 which takes a list and returns the product of all numbers in the list

A program called p8 which takes a number and returns its factorial, eg the factorial of 4 is 24 (1 \* 2 \* 3 \* 4) HINT use recursion

A program called p9 which takes two lists of numbers and returns a list of numbers which are common to both input lists. HINT use the list operators (++) and/or --) (THIS NEEDS SOME THOUGHT)

A program called p10 which takes a list and returns the list in reverse order HINT USE foldr but define your own operator as a program

A program called p11 which takes a number and returns True if the number is even and False otherwise. Hint use recursion

A program called p12 which takes a list of pairs of numbers and returns the sum of the all the numbers which appear first in the pair.

For example: p12 [(1,2), (4,2), (5,9)] => 10

PRINT OUT A COPY OF THE FILE CONTAINING YOUR PROGRAMS, and bring it with you to the lecture on Tuesday 16th September (if you cannot print your file, then submit a hand-written copy).

NOTE – You should try and complete this assignment by yourself at first in order to learn more. If stuck, then ask for help at the labs.