

MEMORIAL UNIVERSITY OF NEWFOUNDLAND
Department of Mathematics and Statistics

AMAT-2120

Fall 2004

Assignment 1. Due at 10:00am Wednesday September 29, 2002

1. Write a C-program that displays the following data:

- 1) Your name;
- 2) Your initials, each followed by its numerical values in base 10, then in base 2, then in base 8, then in base 16;
- 3) Your "magic number" — some arithmetic combination (of your choice) of numerical values of your initials.

Sample output:

```
NAME= Mary Poppins
First initial= M= 77(dec)=1001101(bin)=115(oct)=4D(hex)
Second initial= P= 80(dec)=1010000(bin)=120(oct)=50(hex)
```

```
I define My Magic Number as the arithmetic mean of my initials.
It equals 78.50
```

Make sure that your program is properly documented, that is contains required introductory comments (your name, course, assignment no, date), as well as other comments if necessary. The program must be tested (compiled and run) prior to submission. Supply a printout of your source C-file (text of the program) and a printout of your script file showing how your programs compiles and works.

2. Trace execution of the following fragment of code by hand and find the final value of the variable z . Assume that all variables are declared as `int`. (Numbers on the left are line numbers. They are not part of the program.)

```

1  x=70; /*initial value*/
2      x++;
3  y=x-2;
4  y/=3;
5  z=(x-y)/5;

```

Method: Fill in the table (each time one of the values is updated, fill in a new row in the table).

line#	x	y	z	comment
1	70	?	?	(initial value)
2				
3				
4				
5				