

**INEL 4206. Final Exam, Take home problems. Problem 6**  
**Due on May 13, 2013, 11:30 AM**

**NAME:**

**Section:**

**RULES:**

1. Pages must be numbered. You must write your name and section at the top of each page.
2. You must write with blue or black ink. No pencil, and no computer generated text, except if absolutely necessary.
3. Use both sides of sheet of paper or else use recycled paper.
4. Staple your sheets. NO loose sheets.
5. This sheet of paper should be rendered too. Keep a copy of what you rendered and also keep all your work available for discussion or happy hour, if necessary.
6. The professor may ask the student to answer oral questions about the problem.

**ON THE SOURCE PROGRAMS:**

7. Programs should only be sent by email.
8. Undocumented or ill documented programs are not valid and result in 0 for the whole problem.
9. The first two lines of the source program should be the student's name and student number ID (not Random ID).
10. The following lines should state the problem and explain how can the user introduce data and verify the correctness of the program.
11. The program file should be named as XXYYZZ\_ProbW.asm, where XX are the first two letters of your paternal last name, YY those of your maternal last name, ZZ those of your name and W the number of the problem. (For example, in my case PAGARO\_Prob1.asm)
12. Send your program by email to rogelio.palomera@upr.edu. The subject should say "Final Exam: Problem X", where X is the number of the program.

**Problem 6:** Write a program that converts a positive decimal integer number to another one base 18. I must be able to read the answer in the Memory window as if it were a display (refer to problem 5).

Try converting 5357 by hand and check with your program to see in the RAM section

“5357 base 10 yields G9B base 18”.

You must present a flowchart of the program. The comments for the instructions MUST MAKE CLEAR WHICH STEP IN THE FLOWCHART IS BEING EXECUTED.