

## Notes on Computer Project #2

---

Comments about the assignment and responses to frequently asked questions will be added to this file as necessary.

\*\*\*\*\* comments added on 09/06/18 \*\*\*\*\*

1) Please note the following statement from the assignment handout:

The deliverable for this assignment is:

proj02.design -- the text file for your design

Be sure to use the specified file name, and to submit your file for grading via the handin system.

Please review the information at:

<http://www.cse.msu.edu/~cse320/Course/intro.handin.pdf>

The "handin" system allows you to submit files for grading. It is possible to submit your solution files multiple times: the last files which you submit will be graded.

2) Note that you are only designing the eight circuits for this project. In Computer Project #3, you will implement and test your circuits using the "sim" software package.

3) The minimized expressions for your eight functions must be given in sum of products form. That is, each function must be expressed using one or more products (AND terms), and at most one sum (OR term).

The following are all examples of functions in sum of products form:

a() =  $AB' + AC + A'BC'$   
b() =  $A + BC$   
c() =  $ABC'$   
d() =  $B$

In contrast, the following functions are not in sum of products form:

e() =  $AB + C(D+E)$   
f() =  $(A+B)'$

Please note that both of those functions can be expressed in sum of products form:

e() =  $AB + CD + CE$   
f() =  $A'B'$

A minimized function which is given in sum of products form is desirable for several reasons: it corresponds closely to the original formulation of the unminimized function (the truth table or minterm canonical form), and it can be implemented using "two-level logic" (AND gates, followed by a single OR gate).

--M. McCullen