**Software Engineering Department**

**Computer Organisation and Programming Course   
final assignment**

**Pocket Calculator application**

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# Pocket Calculator application design

**You write the document in English!** It is for your own good that you practice using English as much as you can.

If you add or remove sections in the document - Generating the **Table of Contents** is achieved by going to the table of contents on page 1, clicking the right mouse button, and selecting 'Update Field'.

**If you have nothing to say in a specific section – you can erase the section!**

## Extra Work Carried Out (extra 25% items)

Please put in what you did so I will know what to check for. The options are:

1. 5% for checking input & addition over and underflow
2. 5% for enabling Back-Space in input (this is difficult to do together with sophisticated input)
3. 10% for fast multiplication and fast division
4. 5% for Hexadecimal and Binary input/output
5. 15% for sophisticated input

## Major Design/Implementation Decisions

If there are any important decisions you have made that I should know – put them here!

You do not have to use the stack for passing parameters! You can pass the 2 operands through global variables.

The following major design decisions were made during the design and implementation phases:

* Integers are represented internally by 2 words: one word for the absolute value and the other word specifies the sign of the value (i.e. positive or negative) **OR** integers are represented internally using the 2's complement representation
* All parameters to the subroutines are passed through… bla bla…
* Bla bla…

## The High-level Algorithms

A high-level representation of your ***main***() and any other special parts you did – like the special division or multiplication, for example.

The high-level language you use is of your choice… or use my pseudo-code.

PLEASE make sure you use font 9 or 10 with line spacing of 9 or 10 points.

# The User Guide

The **user guide** is intended to enable me to run the application without you being next to me.

It should contain 2 things (at least):

1. Instructions on how to use the application.
2. Explanation as to what of the extras you have done so that I do not have to guess it and I can easily check that the extras work.
3. Anything else you think is important for the user like limitations or problems with your application.