Mathematics 1266 (C Programming) Hilary 2019

January 27, 2019

1 First assignment, w/c 28/1/19, due 9am Monday 4/2/19

The assignment is to write a C program, check that it works, and submit the C program. You should produce this *exactly,* with correct spacing, full stop, and newline.

Your program should print

```
100 green bottles standing on a wall
100 green bottles standing on a wall
If one green bottle should accidentally fall
There'd be 99 green bottles standing on the wall.

99 green bottles standing on a wall
99 green bottles standing on a wall
If one green bottle should accidentally fall
There'd be 98 green bottles standing on the wall.
```

and so on down to

```
1 green bottles standing on a wall
1 green bottles standing on a wall
If one green bottle should accidentally fall
There'd be 0 green bottles standing on the wall.
```

Your program will produce about 500 lines of output. You must use a for-loop, doing things like

```
printf("%d green bottles standing on a wall\n", i);
```

Edit, compile, and run your program to make sure it works. When it works correctly, submit it. Submit it using `submit-work`, which runs on `synge` and probably on other maths machines.

Points to note.

- Make sure your program works, ***on the maths machines,*** or at least that it 'compiles.' It is bad if a program is not working properly, but the ***worst*** thing you can do is to submit a program which does not compile on the maths machines.

  Some maths machines run Linux and some run FreeBSD. To find out which system you are using, type

```
    echo $OSTYPE
```

- In programming, it is very important to follow a specification *exactly,* and for this reason you will always be expected to follow the specification *exactly.* In the above 400-line poem, the spelling, capitalisation, punctuation, and line-breaks must be followed exactly.

- You should use indentation to make the program as easy to read as possible. Statements between curly braces should be indented, and so on.

- For the submit-work software: steps in using it are illustrated by a series of screenshots on the course web-page.

- See below how *comments* can be written in a program ...

```
Appropriate indentation:
#include <stdio.h>   /* at start of line  */

main ()               /* at start of line */
{                     /* brace at start of line */
  printf{"hello\n");
                      /* indent two places, for readability */

  printf("goodbye\n");  /* indent two places, for readability */
}                     /* brace at start of line */
```