Practice Examples for Lab: Set 12

- 1

Write a program that reads in an integer from the keyboard and prints it out in words. For example, on reading in 368, the program should print "three hundred and sixty eight".

- 2

For this exercise it is important to know that the codes for the digits are consecutive, starting at 0. Further '8' - '0' is valid expression and evaluates to the difference in the code used to represent the characters, and is thus 8. To clarify, if we execute

```
char text[10] = "1729";
int d = text[1] - '0';
```

Then d will have the value 7. Use this to write a function that takes a char array containing a number and return an integer of the corresponding magnitude.

Practice Examples for Lab: Set 12

- 3

Suppose `destination` and `source` are of type `char*`. What do you think the following statement does?

```
while(*destination++ = *source++);
```

Note: it uses several programming idioms you have been warned not to use. The point of this exercise is not to encourage the use of these idioms but to warn you how dense C++ code can be.

- 4

Write a "calculator" program that takes 3 command line arguments in addition to the name of the executable: the first and third being `double` values and the second being a single `char`. The second argument must be specified as an arithmetic operator, i.e. `+`, `-`, `*` or `/`. The program must perform the required operation on the two numbers and print the result.

Practice Examples for Lab: Set 12

- 5

Write and test a function that returns the *plural* form of the singular English word that is passed to it.

- 6

Write and test a function to reverse a C-string in place, without any duplication of characters.

- 7 Write and test the `strrchr()` function.

Write and test the `strstr()` function.

Write and test the `strncpy()` function.

Write and test the `strcat()` function.

Write and test the `strcmp()` function.

Write and test the `strncmp()` function.

Write and test the `strspn()` function.

Write and test the `strcspn()` function.

Write and test the `strpbrk()` function.