

## Lab 4.6.23.1 Pointers and sizeof

### Objectives

Familiarize the student with:

- Pointers
- The *sizeof* operator
- Fixing errors in a program

### Scenario

Write a simple program that prints the size of types in your architecture. Check this for all basic types, the variables of some types and some pointers - like the output list below. Your version of the program must print the same result as the expected output, unless you are working in a different architecture.

```
#include <stdio.h>

int main()
{
    /* your code */
    return 0;
}
```

### Example output

```
1 byte for chars
1 byte for char variables
2 bytes for shorts
2 bytes for short variables
4 bytes for ints
4 bytes for int variables
4 bytes for longs
4 bytes for long variables
8 bytes for long longs
8 bytes for long long variables
4 bytes for floats
4 bytes for float variables
8 bytes for doubles
8 bytes for double variables
4 bytes for pointers
4 bytes for pointer variables
4 bytes for address of char variable
4 bytes for pointer to char variable
1 byte for value stored by pointer to char variable
```