

## Lab 9 Mixed language programming

### *Introduction*

The aim of this lab is to familiarize you with the C-calling convention and calling conventions in general. This will be achieved by studying and modifying an assembly language source file which will be combined with a C source file to produce an executable program.

### *Procedure:*

Download the files from the web site. Compile, link and assemble as follows:

Open a terminal. Change directory to where your downloads are located:

```
cd Desktop/Downloads
```

Compile and link as follows:

```
gcc -g mlpc1.c mlpa1.s -o mlp1
```

Note: gcc is smart enough to understand the files ending in “.s” are to be run through the assembler and those ending in “.c” are to be processed by the c-compiler.

Debug using insight as follows:

```
insight mlp1
```

Create a new assembly language function with the following C-prototype:

```
int CopyString(char *SourceString, char *DestinationString);
```

The function copies SourceString to DestinationString and returns a count of the number of bytes copied. Be sure not to confuse SourceString and DestinationString parameters in the assembly language function.

Test and debug with insight.