Advanced C

Chapter 5 – sections 5.1-5.5

C code tool chain

- Pre-processor (gcc -E)

- Compiler   (gcc -c)

- Linker (ld, but invoked via gcc for us)

- Loader (ld-linux.so)

Define

- Pointer

- Memory Address

- Value

Files to review

- pointerToStaticData.c

- pointers.c

- charArraysAndStrings.c

Pointers to static data

```c
#include <stdio.h>

int main ()
{
  int value;
  int *pValue = &value;
  value = 8;
  printf ("%d %d\n", value, *pValue);
  return 0;
}
```

Pointers & functions

```c
void printIt (int *pInt)
{
    int input;
    scanf("%d", &input);
    *pInt = input * 2;
}


// The following is in main
int value;
printIt( &value );
```

Pointers & functions

```c
void printIt (int *pInt, int size)
{
    int i;

    for(i = 0; i < size; i++)
    {
        printf("%d %d %d \n",
            (unsigned int) (pInt + i),
            pInt[i], *(pInt + i) );
    }
}
```

What is the output if the base of the array is location 1000 and size is 4?