Template Week 1 – Bits & Bytes

Student number:

Assignment 1.1: Bits & Bytes intro

What are Bits & Bytes?

What is a nibble?

What relationship does a nibble have with a hexadecimal value?

Why is it wise to display binary data as hexadecimal values?

What kind of relationship does a byte have with a hexadecimal value?

An IPv4 subnet is 32-bit, show with a calculation why this is the case.

Assignment 1.2: Your favourite colour

Hexadecimal colour code:

Assignment 1.3: Manipulating binary data

Colour	Colour code hexadecimaal (RGB)	Big Endian	Little Endian
RED			
GREEN			
BLUE			
WHITE			
Favourite (previous assignment)			

Screenshot modified BMP file in hex editor:

Bonus point assignment – week 1

Convert your student number to a hexadecimal number and a binary number.

Explain in detail that the calculation is correct. Use the PowerPoint slides of week 1.

572539 naar hexadecimal = 8B91B

572539 naar binary = 10001011001000110 11

Converten naar hexadeciamaal heb ik zo gedaan:

- 572539 : 16 -> rest = 11 -> B
- 35783 : 16 -> rest = 7
- 2236 : 16 -> rest = 12 -> C
- Etc..

Converten naar binary heb ik zo gedaan:

- 572539 : 2 -> rest = 1
- 286269 : 2 -> rest = 1
- 143134 : 2 -> rest = 0
- Etc..

Ready? Save this file and export it as a pdf file with the name: **week1.pdf**