Template Week 1 – Bits & Bytes

Student number: 569073

Assignment 1.1: Bits & Bytes intro

What are Bits & Bytes?

Een bit is een binary nummer

Een byte is 8 binary nummers achterelkaar

What is a nibble?

A nibble is 4 bits or 4 binary numbers

What relationship does a nibble have with a hexadecimal value?

Een nibble is 4 bites en 4 is ook de hoeveelheid bits die je nodig hebt om 1 hexadecimaal naar binary te vervangen

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

Cause its easier to read for human and more compact

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

A hexadecimal value is 2 bytes

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

Ipv4 heeft 4 delen van 8 bits dus 4 * 8 =32 dus daarom 32 bits
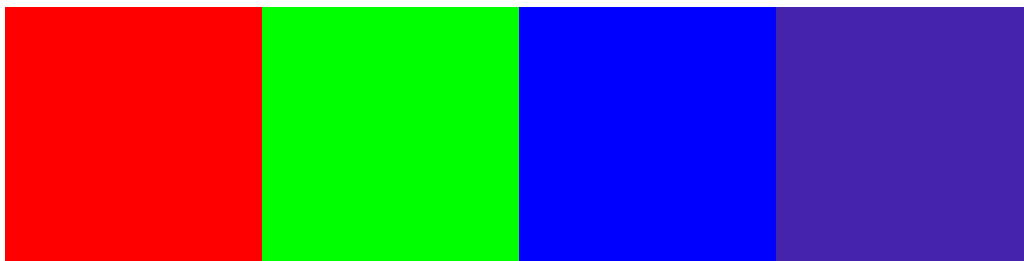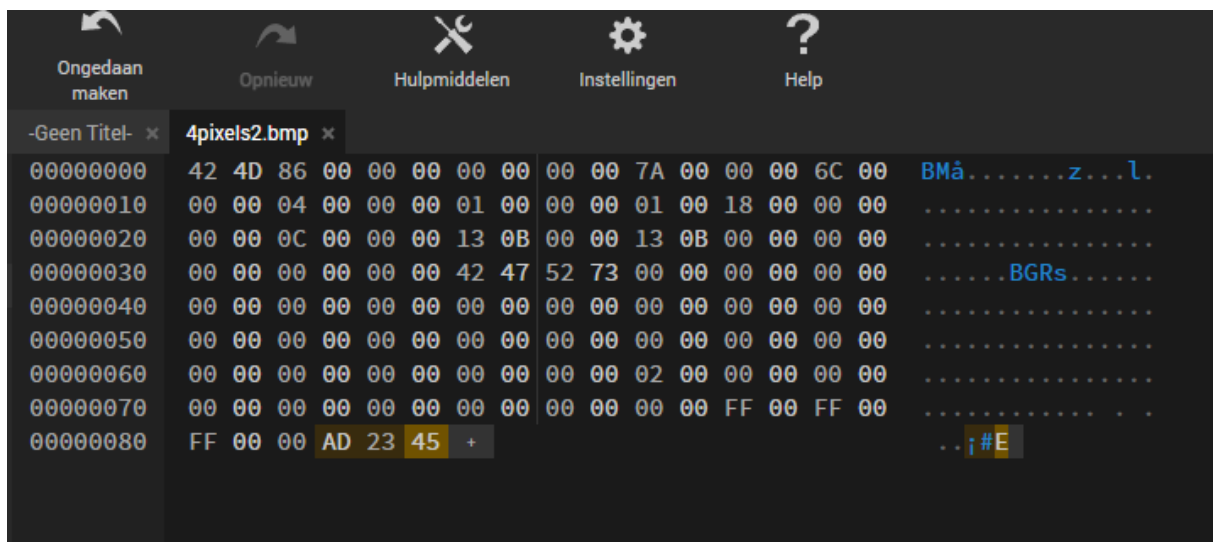
Assignment 1.2: Your favourite colour

Hexadecimal colour code:

#3f016e

Assignment 1.3: Manipulating binary data

Colour	Colour code hexadecimaal (RGB)	Big Endian	Little Endian
RED	#ff0000		
GREEN	#00ff00		
BLUE	#0000ff		
WHITE	#ffffff		
Favourite (previous assignment)	#3f016e		

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.

00000101 00000110 00001001 00000000 00000111 00000011

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