ICS Homework 1

September 24, 2021

1 Conversion

Fill the table below:

Binary	Hexadecimal	Decimal
11111100101	0x7E5	2021
10000000100001	0x2021	8225
100110111100	0x9BC	2492

2 C program

What will the following program print?

```
1  #include <stdio.h>
2
3  #define N 1+1+1
4
5  int main() {
6      printf("N is %d, N^2 is %d\n", N, N * N);
7      return 0;
8  }
```

It will print:

N is 3, N^2 is 5

$1+1+1 * 1+1+1$

$= 1+1+1+1+1$

$= 5$

3 Bit operations

Give two 8-bits wide numbers A=0x6A and B=0x5F. Calculate the values of the following expressions.

1. A & B
2. A | B
3. A ˆ B
4. (A & B) | (A ˆ B)

$A = 1101010$
$B = 1011111$

1. $A \& B = 1001010 = 0x4A$
2. $A | B = 1111111 = 0x7F$
3. $A \wedge B = 0110101 = 0x35$
4. $(A \& B)|(A \wedge B) = 1111111 = 0x7F$