NAME : MUHAMMAD ALI

SECTION : C

ROLL # : 21L-5463

ACTIVITY # 2

1. Different encoding schemes and their details.
2. ASCII:

ASCII stands for American standard code for information interchange. It was published in 1968 by ANSI (American National Standard Institute). It is the most widely used coding scheme for personal computers. The 7-bit code can represent 128 characters. It is not enough to represent some graphical characters displayed on computer screens. An 8-bit code can represent 256 characters. The extended 128 unique codes represent graphic symbols.

1. UTF-08:

**UTF**-**8** is a variable-width character encoding used for electronic communication. Defined by the Unicode Standard, the name is derived from Unicode (or Universal Coded Character Set) Transformation Format – 8-bit. **UTF**-**8** is capable of encoding all 1,112,064 valid character code points in Unicode using one to four one- byte (8-bit) code units.

1. UTF-16:

**UTF-16 (16-bit Unicode Transformation Format) is a character encoding capable of encoding all 1,112,064 valid character code points of Unicode** (in fact this number of code points is dictated by the design of UTF-16). The encoding is variable-length, as code points are encoded with one or two 16-bit code units.

1. Binary number = 11001

Decimal number = 9

1. Binary number = 11010010

Decimal number = 210

1. Decimal number = 45

Binary number = 101101

1. Hexadexcimal number = B2

Binary number number = 101110

1. Binary number = 11011

Hexadecimal number = 1B

1. Decimal number = 20

Hexadecimal number = 14

1. Hexadecimal number =2C

Decimal number = 44

1. Binary number = 1010110

Decimal number= 172

1. Decimal number = 168

Binary number = 10101000

1. Hexadecimal number = 0x2301

Binary number = 1011001