



Assignment # 01
Microprocessor & Assembly Language
BS (CS)
Spring semester 2018

- Q.1 What is the relationship between high-level language and machine language?
- Q.2 Explain the concept of *portability* as it applies to programming languages.
- Q.3 Give an example of an *embedded systems* application.
- Q.4 What is a device driver?
- Q.5 Why would a high-level language not be an ideal tool for writing a program that directly accesses a particular brand of printer?
- Q.6 Translate the following C++ expression to assembly language, using the example presented earlier in this chapter as a guide: $X = (Y * 4) + 3$.
- Q.7 In your own words, describe the *virtual machine* concept.
- Q.8 What is the decimal representation of each of the following unsigned binary integer 11111000?
- Q.9 What is the sum of binary integers 00001111 + 00001111?
- Q.10 What is the hexadecimal representation of the binary number 1100 1111 0101 0111?
- Q.11 What is the binary representation of the hexadecimal number E5B6AED7?
- Q.12 What is the unsigned decimal representation of hexadecimal integer 3A?
- Q.13 What is the 16-bit hexadecimal representation of signed decimal integer -26?
- Q.14 Convert a 16-bit hexadecimal signed number 7F9B to decimal.
- Q.15 What is the decimal representation of the signed binary number 10110101?
- Q.16 Why was Unicode invented?
- Q.17 What is the value of the Boolean expression $(T \wedge F) \vee T$?
- Q.18 Create a truth table to show all possible inputs and outputs for the Boolean function described by $\neg(A \vee B)$.