

Lab # 4

Task 1:

Write a program that will

- a) Prompt the user to enter a character
- b) On the next line prints its ASCII code in binary
- c) The number of 1 bit in its ASCII code.

Sample execution:

Enter a character: **A**

The ASCII code of **A** in binary is 01000001

The number of 1 bit is 2

Task 2:

Write a program that will

- a) Prompt the user to enter a character
- b) On the next line prints its ASCII code in HEX
- c) Repeat this process until the user type a carriage return

Sample execution:

Enter a character: **Z**

The ASCII code of **Z** in HEX is 5A

Enter a character: **A**

The ASCII code of **A** in HEX is 41

Enter a character:

Task 3:

Write a program that will

- a) Prompt the user to enter a hex number of four digits or less, if the user enters an illegal character, he or she should be prompted to begin again. Accept only uppercase letters.
- b) On the next line prints it in binary

Your program ignores any input beyond four characters.

Sample execution:

Enter a hex number (0 to FFFF): **1a**

Illegal hex digit, try again: **1ABC**

In binary it is: 0001101010111100

Task 4:

Write a program that will

- a) Prompt the user to enter a binary number of 16 digits or less, if the user enters an illegal character, he or she should be prompted to begin again.
- b) On the next line prints it in Hex

Your program ignores any input beyond 16 characters.

Sample execution:

Enter a binary number up to 16 digits: **11100001**

In Hex it is E1

Task 5:

Write a program that will

- a) Prompt the user to enter 2 binary numbers of 8 digits each, if the user enters an illegal character, he or she should be prompted to begin again.
- b) On the next line prints it sum in binary

Sample execution:

Enter a binary number up to 8 digits: **11001010**

Enter a binary number up to 8 digits: **10011100**

The binary sum is: 101100110