Write your name below and indicate your role,

Project Manager (PM), Recorder (R)

Name _____ Role _____

Name _____ Role _____

Unicode Encryption

Your Tasks (Mark these off as you go)

- ☐ Determine the binary and hexadimal equivalent for unicode characters
- ☐ Have Ms. Pluska check off your tasks
- ☐ Write code to print out all the unicode characters given their decimal or hexadecimal equivalent
- ☐ Write code to convert a String of characters to thier base 10 equivalent in unicode
- ☐ Receive credit for the group portion of this lab

☐ Determine the binary and hexadecimal equivalent for unicode characters

The unicode system has corresponding characters for the values 0 thru 65536. The ASCII system common to our language encompases the first 255 places.

(a) Write code to determine the number of bits required to represent the ASCII symbols.
(b) Write code to determine the number of bits required to represent the unicode symbols.

Unicode values are often represented in hexidecimal to reduce the length of digits requried to represent them.

(a) Write code to determine the number of places required to represent the ASCII symbols in hexdecimal.
(b) Write code to determine the number of places required to represent the unicode symbols in hexadecimal.

Below are some characters from the unicode character set.

Char	Decimal	Binary	Hexadecimal
✞	10014		
Ⓟ	9413		
Ã̃	7850		
ʊ	7551		

Use your program from the previous lab to convert the decimal unicode equivalent values to binary. Hint: You will need to report the final binary number as a *long* variable type in your code otherwise you will get an overflow error.

How would each character be represented in hexadecimal? (Show your work)

☐ Have Ms. Pluska check off your tasks before you continue

Before you continue have Ms. Pluska check off the above tasks

Do not continue until you have Ms. Pluska's (or her designated TA's)

signature _____

□ Write code to print out all the unicode characters given their decimal or hexadecimal equivalent

The unicode system has corresponding characters for the decimal values 0 thru 65536. Write a loop that could be used to print out all the corresponding characters.

Write code that could be used to represent each unicode character in hexadecimal

□ Write code to convert a String of characters to their base 10 equivalent in unicode

Consider a String of characters like “Code is Cool!”, or even your name. Write code that could be used to convert each character in the String to its unicode equivalent and print the result to the consol.

Consider the same code, but this time write code that could be used to convert each character in the String to its unicode equivalent in decimal and print the result backwards.

□ Receive Credit for the group portion of this lab

Before you submit your lab have Ms. Pluska check off the above tasks

Do not continue until you have Ms. Pluska’s (or her designated TA’s) signature _____