

# COSC 350 System Software Midterm #1-1

03/03/2021

Name: \_\_\_\_\_

1. (10 pt) Write a syntax free shell script “task1.sh” that reads sequence of integers on the command line and calculate odd value sum and display the result. You need send as a separate file with name **task1.sh**. Use for loop. Do not use (()) in loop or calculation. Exit the program with an appropriate error message under the following error condition: if there is no argument on the command line.  
  
Ex) for ./task1.sh 12 9 21 10 100 23  
Output: The sum of odd arguments is 53
2. (10 pt.) Redo problem 1 with compliable C code . You need send as a separate file with name **task2.c**. Define your own function (**int str\_to\_int(char\*)**) to convert a c-string to an integer (**Do not use** any library function to convert).
3. (30 pt.) You need write a following compliable program. You need send as a separate file with name **task3.c**. Write a C main function that takes one command-line argument, the name of an input file. The input file contains exactly one integer spread out over a single line of up to 80 characters. For example, the integer 3579 is embedded in the line az3mqrm5t?7!z\*&gqmzt9v. Your program uses system calls to do the following:
  - a. open and read each character from the input file, accumulating the discovered digit characters into a character array (c-string). (**Do not use** isdigit (int c) function to check number character)
  - b. Define your own function (**int str\_to\_int(char\*)**) to convert a c-string to an integer (**Do not use** any library function to convert). You can reuse the function from previous problem.
  - c. Add 100 to the integer  
Define your own function (**char \*int\_to\_str (int value)**) to convert the sum back to a c- string (Do not use any c library function to convert).
  - d. Use a **system call write()** to write the string to standard output.