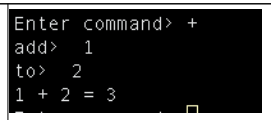
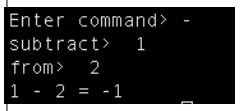
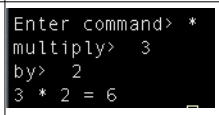
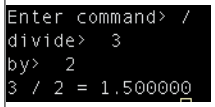
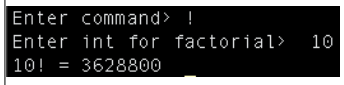
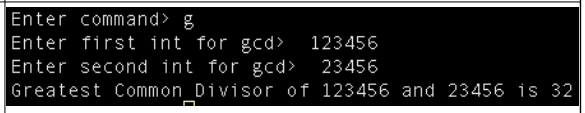
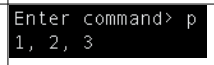
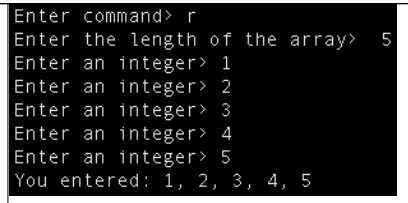
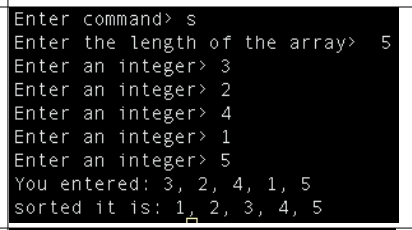
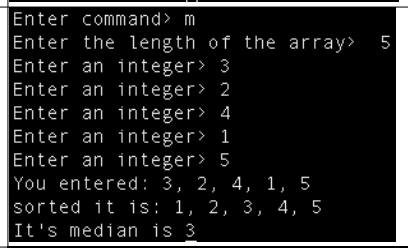
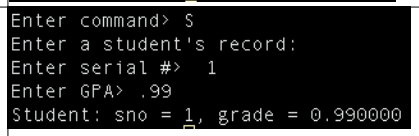
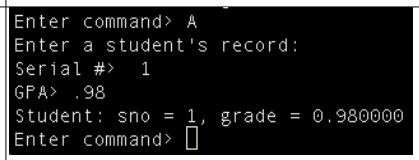
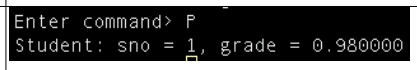
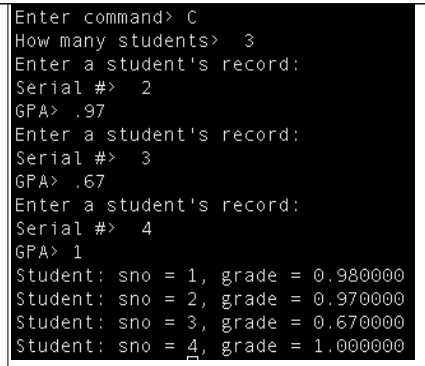
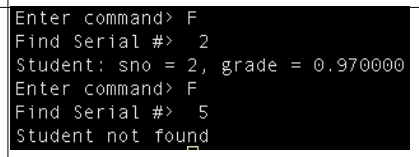
#		Story	Example	Test
1		As a user, I want to know how to exit the program when I first start it, so I can exit it if I accidentally start it.	When you start the program you see the message: Calculator (enter 'x' to exit). (figure 1)	calc01_instructions> ./calc Calculator (enter 'x' to exit) calc01_instructions>
2		As a user, I want to be able to enter a command, so my calculator can do multiple things.	The programs prints “Enter command> “ and then accepts a command and terminates. It does no do anything else	calc02_command> make gcc -Wall -std=c11 -g -o calc.o -c calc.c gcc -Wall -std=c11 -g -o main.o -c main.c gcc -Wall -std=c11 -g -o calc calc.o main.o calc02_command> ./calc enter 'x' to exit Enter command> a
3		As a user, I want to be able to exit the program, so I can tell it I am finished.	You enter 'x' and the program ends. If you enter any other character, the program does not end. (figure 2)	calc03_exit> ./calc enter 'x' to exit Enter command> a Enter command> Enter command> b Enter command> Enter command> x calc03_exit>
4		As a user, I the calculator to notify me when I have entered an incorrect command, so I know when I have make a typo.	Enter a non-command. See a prompt for another command.	enter 'x' to exit Enter command> z Enter command> Enter command>
5		As a user,I want the calculator to take a single character off the line, so it doesn't print out an “invalid command” message every time I enter a command	Enter invalid command; it will print out “invalid command” only once. Execute a valid command; it will not print out “invalid command” at all.	enter 'x' to exit Enter command> x calc> ./calc enter 'x' to exit Enter command> z Invalid command: z Enter command>
6		As a user, I want to be able to enter a int operand, so my calculator can do integer arithmetic.	The program prints “Enter an integer> “ and then accepts and integer.	Enter command> i Enter int> 1 You entered 1 Enter command>
7		As a user, I want the calculator to notify me when I have entered incorrect integer operand , so I know when I have made a typo.	Enter a non-digit. See “<digits> is not an integer	calc05b-int> ./calc enter 'x' to exit Enter command> i Enter integer> 1 You entered 1 Enter command> i Enter integer> a a is not an integer, try again> 1.2 1.2 is not an integer, try again> 2 You entered 2

8		As a user, I want to be able to add two numbers using the program, so I can use it for addition.	You enter '+' at the prompt and you are prompted for two integers. When you enter two integers are entered, the program prints the sum of the two numbers.	
9		As a user, I want to be able to subtract two numbers using the program, so I can use the calculator for subtraction.	You enter '-' at the prompt and you are prompted for two integers. When you enter two integers are entered, the program prints the difference of the two numbers.	
10		As a user, I want to be able to multiply two numbers using the program, so I can use the calculator for multiplication.	You enter '*' at the prompt and you are prompted for two integers. When you enter two integers are entered, the program prints the produce of the two numbers.	
11		As a user, I want to be able to divide two numbers using the program, so I can use the calculator for division.	You enter '/' at the prompt and you are prompted for two integers. When you enter two integers are entered, the program prints the quotient of the two numbers.	
12		As a user, I want to be able to use the program to calculate a factorial, so I can use the calculator for factorials.	Enter '!' at the prompt and you are prompted for an integer. The calculator prints the factorial of that integer. (As written requires the completion of most of story 3, prioritized below.)	
13		As a user, I want to be able to use the program to calculate the greatest common divisor (GCD) of two numbers, so I can use the calculator for GCD.	You enter '"g" at the prompt and you are prompted for two integers. When you enter two integers are entered, the program prints the greatest common divisor of the two numbers.	
14		As a user, I want to be able to use the program to print decimal number in binary representation, so I can use the calculator for binary conversion.	Enter 'b' at the prompt and you are prompted for an integer. The calculator prints the binary representation of that integer.	
15		As a user, I want to be able to print out an array so I can see the results of my array algorithms.	Enter a 'p' and the calculator prints "{1, 2, 3}". The array is defined in the main program as "float test_array[3] = {1, 2, 3}".	

16		As a user, I want to enter an array of numbers so I can do calculations on them.	If you enter an 'r' command you are prompted for an integer that represents the length of the array. You are then prompted for that number of floating point numbers. The program then prints out the sequence entered.	
17		As a user, I want to be able to sort an array of numbers so I can calculate the median.	If you enter an 's' command you are prompted to enter an array, the array is then sorted and the sorted array is printed.	
18		As a user, I want to be able to find the median of an array of numbers, so I can use it for calculate the median.	Enter 'm' at the prompt and you are prompted for sequence of integers. The calculator prints the median.	
19		As a user, I want to print a students record, so I can see the students grade and serial number.	Enter 'S' at the prompt and you will be prompted for an integer student serial number and a floating point grade. The serial number and grade are then printed on the screen.	
20		As a user, I want to be able to add a student to the list of students, so I can add student grades to my class.	Enter 'A' at the prompt and you will be prompted to add a student. You will then see the list of students including the added student.	
21		As a user, I want to print all of the students records, so I can see the grades of the entire class.	Enter 'P' at the prompt and all of the records in the database will be printed.	

22		As a user I want to save a class of students' records so I can track a set of grades.	Enter 'C' at the prompt and you will be prompted for the number of student records you will enter. Then you will add that number of student serial numbers and grades as in story 15.	
23		As a user, I want to find a student grade by serial number, so I can track grades in a class.	Enter 'F' at the prompt and you will be prompted for an integer. The serial number and the grade associated with that serial number are then printed. If no serial number is found; “Not found” is printed.	
24		As a user I want to be able to remove a student from the class, so I can delete students who drop.	Enter 'D' at the prompt and you will be prompted for a serial number, you will then see the list of students without the student having that serial number.