

## CS 2213 Advanced Programming Recitation – Exercise

Write C programs for the following two problems as a.c and b.c and test your solutions. To get data from user use the textbook's libraries and compile your program with gccx.

Then go to BB and Recitation Assignments, and submit your programs...

### Arithmetic expressions

a.

- Write a C program that asks user to enter values for the double variables (a, b, c, d) in the following formula. It then computes the result (res) and prints it with three digits after .

$$res = \frac{a + b}{c - d} + \frac{\sqrt{a + c}}{a - b} \frac{c + b}{a + c}$$

b.

- Suppose you are given a number in the range [100 999]
- Write a program to reverse a given number
- For example,  
num is 258  
reverse is 852

```
d1 = num / 100;  
d3 = num % 10;  
reverse = num - (d1*100+d3) +  
           d3*100 + d1;
```

```
int d1, d2, d3, num=258, reverse;  
d1 = num / 100;  
d2 = num % 100 / 10;  
d3 = num % 10;  
reverse = d3*100 + d2*10 + d1;  
printf("reverse is %d\n", reverse);
```

```
/* Don't forget to include comments about the problem, yourself and  
each major step in your program! */
```

**What to return: !!!! NO LATE RECITATION ASSIGNMENT WILL BE ACCEPTED !!!**

1. Follow the problem solving methodology, and solve the problems.  
Then convert your solution(s) to a C program. You can name your program as a.c and b.c
2. Compile and run them. Copy/paste the result in an output file, say out01.txt.

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You must submit your work using Blackboard Learn and respect the following rules:

- 1) All assignments must be submitted as either a zip or tar archive file
  - 2) Assignments must include all source code.
  - 3) Assignments must include an output.txt file which demonstrates the final test output run by the student.
  - 4) If your assignment does not run/compile, the output.txt file should include an explanation of what was accomplished, what the error message was that prevented the student from finishing the assignment and what the student BELIEVES to be the underlying cause of the error.
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