

Programming Design Worksheet - Redfield

for CS1310 (programs 2-7) and CS1311 (programs 1-6)

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First name **Davide** Last name **Russillo**

Design for program name **Operations**

DATA

C DECLARATIONS for main & global

double a

double b

int operation

Algorithm to PSEUDOCODE level for each function

(remember to indent under if, switch, while, do-while, for)

main:

print(this program adds, subtracts, multiplies, or divides two user input values)

print(enter first value)

a = get_input()

print(enter second value)

b = get_input()

print(1: add \n2: subtract \n3: multiply\n4: divide)

input(operation)

switch(operation)

case 1:

print(\$a + \$b = \$add(a,b))

case 2:

print(1: a - b\n 2: b - a)

input(operation)

if(operation == 1)

print(\$a - \$b = \$sub(a,b))

else

```

        print($b - $a = $sub(b,a)
case 3:
    print($a * $b = $mult(a,b)
case 4:
    print(1: a / b\n2: b / a)
    input(operation)
    if(operation == 1)
        print($a / $b = $div(a,b)
    else if(operation == 2)
        print($b / $a = $div(b,a)
    else
        print(invalid operation)
default:
    print(invalid operation)

```

other functions (bold the names): (put them before main in the program!)

```

double get_value()
    double output
    print(input value here)
    input(output)
    print(your value is $output)
    return output

double add(double x, double y)
    return x + y

double sub(double x, double y)
    return x - y

double mult(double x, double y)
    return x * y

double div(double x, double y)
    if(y == 0)
        print("cannot divide by zero!")
        return 0
    else
        return x / y

```