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    COP 3223C

    Assignment 4

    February 6th, 2023

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#include <stdio.h>

int main()

{

    // Part 1

    printf("Part 1\n\n");

    int a = 5, b = 4, c = 3, d = 2;

    if( a <= b + 1 ) // 5 <= 4 + 1 -> 5 <= 5 therefore, TRUE

    {

        printf("a <= b + 1 is: TRUE\n");

    }

    else

    {

        printf("a <= b + 1 is: FALSE\n");

    }

    if ( a < b && c > b ) // 5 < 4 && 3 > 2 are both not TRUE therefore, FALSE

    {

        printf("a < b && c > b is: TRUE\n");

    }

    else

    {

        printf("a < b && c > b is: FALSE\n");

    }

    if( a >= c || d >= 5 ) // 5 >= 3 OR 2 >= 4 one of them is TRUE therefore, TRUE

    {

        printf("a >= c || d >= 5 is: TRUE\n");

    }

    else

    {

        printf("a >= c || d >= 5: FALSE\n");

    }

    if( !( a > b) ) // 5 > 4 is TRUE therefore, !(5 > 4) is FALSE

    {

        printf("!( a > b) is: TRUE\n");

    }

    else

    {

        printf("!( a > b) is: FALSE\n");

    }

    if( b >= a && !(d < b) ) // 4 >= 5 && !(2 < 4) both of them is not TRUE therefore, FALSE

    {

    printf("b >= a && !(d < b) is: TRUE\n");

    }

    else

    {

        printf("b >= a && !(d < b) is: FALSE\n\n\n");

    }

    // Part 2

    printf("Part 2\n\n");

    int grades, passing, mean;

    grades = 0;

    mean = 0;

    passing = 0;

    printf("Enter your grade: ");

    scanf("%d", &grades);

    while ( grades != -1)

    {

        if(grades >= 0 && grades <= 100)

        {

            mean += 1;

        }

        if(grades >= 0 && grades < 70)

        {

            passing += 0;

            printf("Enter your grade: ");

            scanf("%d", &grades);

        }

        else if(grades >= 70 && grades <= 100)

        {

            passing += 1;

            printf("Enter your grade: ");

            scanf("%d", &grades);

        }

        else

        {

            printf("That is not a valid grade!\n");

            passing += 0;

            printf("Enter your grade: ");

            scanf("%d", &grades);

        }

    }

    printf("You have entered %d passing grades.\n", passing);

    double percentagePass = ((double)passing / (double)mean) \* 100;

    printf("%0.1lf%% of the valid grades entered are passing grades.", percentagePass);

}

