CS1428 Lab 3: Fall 2020

Name: Jason McKinnerney jlm573

Lab Section: Lab 17

Type your name at the top of this sheet. Answer the following questions and turn in this sheet before the end of class. **Open this file in a browser to type your answers and print (Ctrl+P) this file as a pdf.**

1. (7 pts) Assume the variables **a = 4, b = 8, c = 10**. If a condition will evaluate to true type T otherwise type F for false.
   a. b == 8 — T
   b. 4 <= a — F
   c. 4 != a — F
   d. b > 8 — F
   e. a == 8 || b < 10 — T
   f. c != 4 && b >= 10 — F
   g. !(a == 8) — F

2. (7 pts) Write an IF statement below that prints "IT'S OVER 9000!" if an integer variable named **powerLevel** is greater than 9000.

```
if (powerLevel > 9000)
  cout << "IT'S OVER 9000!" << endl;
```

3. (6 pts) What is the output of the following code snippets?

```
int x = 200;
int y = 10;
int z = 1;

if (x < y){
        cout << “A” << endl;
}
else if (y < z){
        cout << “B” << endl;
}
else {
        cout << “C” << endl;
}
```

Output: C

```
int x = 200;
int y = 10;
int z = 1;

if (x > y){
        cout << “A” << endl;
}
else if (y > z){
        cout << “B” << endl;
}
else {
        cout << “C” << endl;
}
```

Output: A

4. (50 pts) Rock-paper-scissors originated in Asia. You will write a program that simulates this game by adding to the “Lab 3 Program.cpp” program in Canvas, so that it executes as follows:

    - The user will enter a number 1-3 to select “slug”, “frog”, or “snake”.
    - The computer will select a number 1-3 randomly. (The code to generate a random number and the required standard libraries are already included.)
    - Determine who wins using if/else-if/else statements. **(Snake beats frog, frog beats slug, and slug beats snake).** Print the results to the console.
    - **NOTE**: It is possible for the player to win, lose, or tie
    - The result should include the player’s selection and who won the match.
    - Make sure to check for bad numeric data. Terminate the program if the user selects an invalid number.

Sample Outputs Run 1:
Slug-Frog-Snake Game
1. Slug
2. Frog
3. Snake

Enter a number: 3
Snake beats frog! You win!

Sample Outputs Run 2:
Slug-Frog-Snake Game
1. Slug
2. Frog
3. Snake

Enter a number: 7
ERROR - Invalid Input. Terminating Program.

Sample Outputs Run 3:
Slug-Frog-Snake Game
1. Slug
2. Frog
3. Snake

Enter a number: 3
You both chose snake! It’s a tie!

WRITE your name in the authorship comments at the top of the page.
UPLOAD this pdf with your answers filled in and your source code as lab3.cpp to Canvas.