CS1428 Lab 7: 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 due date. You may use the pre-lab, your book, or internet resources to assist you.

Your instructor will be available on Zoom during the usual lab hours to answer questions or in the Discussion section of Canvas outside of those hours.

If you are struggling with concepts, you can visit https://cs.txstate.edu/resources/labs/tutoring/ to set up an appointment with a lab instructor so that then can explain the concept to you.

1. (15 pts) Write a function definition that has three integers (a, b, c) declared within the function. It should return the value of **c** plus **a** times the value of **b**. Also, write the function prototype and the function call as it would appear in **main**.

Function Prototype:

```
int compute();
```

Function Definition:

```
int compute() {
  int a, b, c;
  cin >> a >> b >> c;
  c = (c + a) * b

  return c;
}
```

Function Call:

```
int answer;
answer = compute();
```

2. (5 pts) What is the output of the following snippet?

```
void first();

int main() {
  cout << “Monster”;
  first();
  cout << “Graveyard s”;
  first();
  cout << “!” << endl;
}

void first() {
  cout << "mash" << endl << endl;
}
```

Output:

```
MonstermashGraveyard smash!
```

3. (50 pts) You will be writing the functions for a dice gambling game where the user and the computer both roll one six-sided die. Whoever gets the highest roll wins. The program will display the user's remaining funds, and then prompt to play again. The user begins the game with $1000, and the game will continue until either the user enters 'N' or runs out of funds. You must create following functions to implement your solution (the main function is provided):

   - **placeBet()**: This integer function will prompt the user for a bet amount and return the inputted integer to the main function.
   - **getRoll()**: This integer function will roll a six-sided die and return this calculated number. Make sure to include the "ctime" and "cstdlib" libraries and seed the random number generator. This function is called twice in your main function: once to get the computer's roll, and again to get the user's roll.
     - roll = rand() % 6 + 1;
   - **playAgain()**: This character function will prompt the user to play again, and will return either a 'Y' or 'N'.

Sample Output:

```
Gambling is an addiction...
You currently have $1000
How much would you like to bet?
$1500
ERROR: Invalid bet amount.
How much would you like to bet?
$900
You rolled 3
Your opponent rolled 6
You lose $900
Would you like to continue? (Y or N): Y
You currently have $100
How much would you like to bet?
$100
You rolled 2
Your opponent rolled 4
You lose $100
You are out of money. You can't play anymore.
You ended with $0
```

WRITE your name in the authorship comments at the top of your program.
UPLOAD this pdf with your answers filled in and your source code as lab7.cpp to Canvas.