Pair Programming 4 Turn In

Name: \_\_\_\_\_Matthew Krahel \_\_\_\_\_\_\_\_\_ Username: \_\_\_\_\_\_\_C1010B11\_\_\_\_\_\_\_\_\_

Partner name: \_\_\_\_\_\_\_Blake Hodges\_\_\_\_\_\_\_\_\_\_\_ Partner username: \_\_\_\_C1010B06\_\_\_\_\_\_\_\_

\_X\_ I certify that my partner did work with me on these pair programming activities. Comment if needed here:

SCORE: \_\_\_\_\_\_\_\_\_\_\_\_ (to be filled in by instructor)

4a (2 points)

**/\*File: pp4a.cpp**

**\* Author: Matthew Krahel and Blake Hodges**

**\* This program randomly selects one card**

**\* from a regular 52-card deck of cards.**

**\*/**

**// Identifying the libraries and namespaces used in this program**

**#include <iostream>**

**#include <cstdlib>**

**#include <string>**

**using namespace std;**

**// Begin Main Function**

**int main()**

**{**

**// Declare the variable**

**string cardFaceName; //Value of the card**

**string cardSuitName; //Suit of the card**

**int randomCardFace; //Random Number to be related to the value**

**int randomCardSuit; //Random Number to be related to the suit**

**const int ACE = 1;**

**const int TWO = 2;**

**const int THREE = 3;**

**const int FOUR = 4;**

**const int FIVE = 5;**

**const int SIX = 6;**

**const int SEVEN = 7;**

**const int EIGHT = 8;**

**const int NINE = 9;**

**const int TEN = 10;**

**const int JACK =11;**

**const int QUEEN = 12;**

**const int KING = 13;**

**const int SPADES = 1;**

**const int CLUBS = 2;**

**const int HEARTS = 3;**

**const int DIAMONDS = 4;**

**// Put a random number in for both variables**

**srand( time(NULL) ); //Seed once**

**randomCardFace = 1 + rand() % 13;**

**randomCardSuit = 1 + rand() % 4;**

**// Apply card value based on random number**

**switch (randomCardFace) {**

**case ACE:**

**cardFaceName = "Ace";**

**break;**

**case TWO:**

**cardFaceName = "Two";**

**break;**

**case THREE:**

**cardFaceName = "Three";**

**break;**

**case FOUR:**

**cardFaceName = "Four";**

**break;**

**case FIVE:**

**cardFaceName = "Five";**

**break;**

**case SIX:**

**cardFaceName = "Six";**

**break;**

**case SEVEN:**

**cardFaceName = "Seven";**

**break;**

**case EIGHT:**

**cardFaceName = "Eight";**

**break;**

**case NINE:**

**cardFaceName = "Nine";**

**break;**

**case TEN:**

**cardFaceName = "Ten";**

**break;**

**case JACK:**

**cardFaceName = "Jack";**

**break;**

**case QUEEN:**

**cardFaceName = "Queen";**

**break;**

**case KING:**

**cardFaceName = "King";**

**break;**

**default:**

**cout << "ERROR1";**

**}**

**// Apply card suit based on random number**

**switch (randomCardSuit) {**

**case SPADES:**

**cardSuitName = "spades";**

**break;**

**case CLUBS:**

**cardSuitName = "clubs";**

**break;**

**case HEARTS:**

**cardSuitName = "hearts";**

**break;**

**case DIAMONDS:**

**cardSuitName = "diamonds";**

**break;**

**default:**

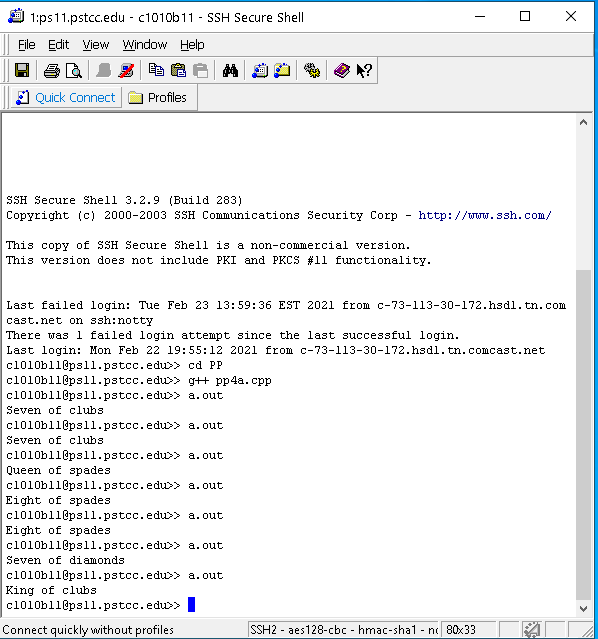
**cout << "ERROR2";**

**}**

**cout << cardFaceName << " of " << cardSuitName << "\n";**

**return( 0 );**

**}**



4b (2 points)

**/\*File: pp4b.cpp**

**\* Author: Matthew Krahel and Blake Hodges**

**\* This program creates a function for**

**\* squaring a number that is to be called**

**\* in the main function.**

**\*/**

**// Identifying the libraries and namespaces used in this program**

**#include <iostream>**

**using namespace std;**

**// Declare Functions**

**double squareAndPrint (double base);**

**// Begin Main Function**

**int main()**

**{**

**// Declare the variable**

**double inputtedBase; //Base inputted by user**

**double outputtedProduct; //Product to be outputted**

**//Request a base from user and output the square**

**cout << "Enter a number: ";**

**cin >> inputtedBase;**

**cout << "The square of ";**

**cout << inputtedBase;**

**cout << " is ";**

**//To display display 2 decimals**

**cout.setf(ios::fixed);**

**cout.setf(ios::showpoint);**

**cout.precision(2);**

**outputtedProduct = squareAndPrint (inputtedBase);**

**cout << outputtedProduct;**

**cout << "\n";**

**return( 0 );**

**}**

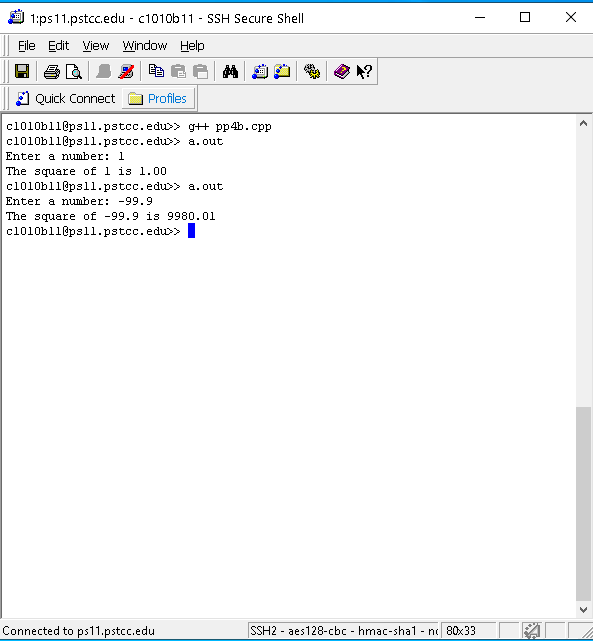
**// Function for squaring a base**

**double squareAndPrint (double base)**

**{**

**return (base \* base);**

**}**



4c (2 points)

**/\*File: pp4c.cpp**

**\* Author: Matthew Krahel and Blake Hodges**

**\* This program calculates the cost of an**

**\* item when multiple of the same item are**

**\* purchased.**

**\*/**

**// Identifying the libraries and namespaces used in this program**

**#include <iostream>**

**using namespace std;**

**// Declare Functions**

**double calculateTotal (double itemCost, double numberOfItems);**

**//Declare Global Variables**

**const double salesTax = .0925; //Sales tax**

**// Begin Main Function**

**int main()**

**{**

**// Declare the variable**

**double itemCost; //Cost of the item inputted by user**

**double numberOfItems; //Number of the items inputted by user**

**double totalCost; //Total cost of all items**

**//Request the item cost and number of items from user**

**cout << "Enter cost of one item and number of items: ";**

**cin >> itemCost >> numberOfItems;**

**//To display display 2 decimals**

**cout.setf(ios::fixed);**

**cout.setf(ios::showpoint);**

**cout.precision(2);**

**totalCost = calculateTotal (itemCost, numberOfItems);**

**cout << "$";**

**cout << totalCost;**

**cout << "\n";**

**return( 0 );**

**}**

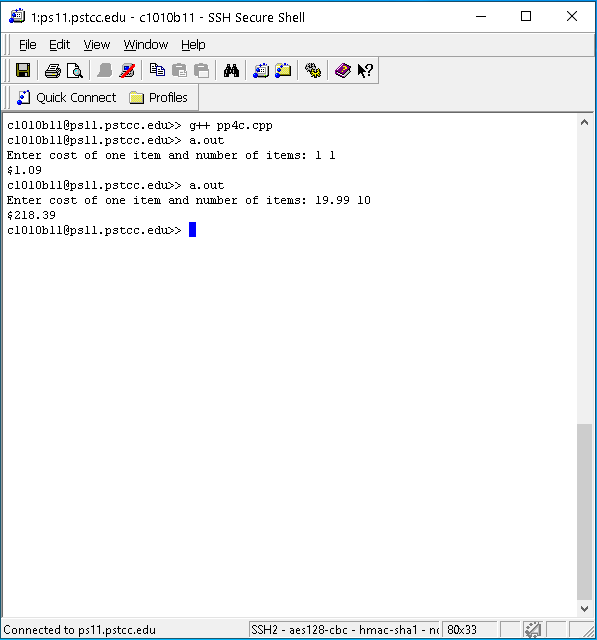
**// Function for calculating the total**

**double calculateTotal (double itemCost, double numberOfItems)**

**{**

**return (itemCost \* numberOfItems \* (1 + salesTax));**

**}**



4d (2 points)

**/\*File: pp4d.cpp**

**\* Author: Matthew Krahel and Blake Hodges**

**\* This program creates a function for**

**\* cubing a number that is to be called**

**\* in the main function.**

**\*/**

**// Identifying the libraries and namespaces used in this program**

**#include <iostream>**

**using namespace std;**

**// Declare Functions**

**double cube (double base);**

**// Begin Main Function**

**int main()**

**{**

**// Declare the variable**

**double inputtedBase; //Base inputted by user**

**double outputtedProduct; //Product to be outputted**

**do {**

**//Request a base from user**

**cout << "Enter a number (0 to end): ";**

**cin >> inputtedBase;**

**//Output the cube**

**if(inputtedBase > 0){**

**cout << "The cube of ";**

**cout << inputtedBase;**

**cout << " is ";**

**//To display display 3 decimals**

**cout.setf(ios::fixed);**

**cout.setf(ios::showpoint);**

**cout.precision(3);**

**//Call the function**

**outputtedProduct = cube (inputtedBase);**

**cout << outputtedProduct;**

**cout << "\n";**

**}**

**} while (inputtedBase > 0);**

**return( 0 );**

**}**

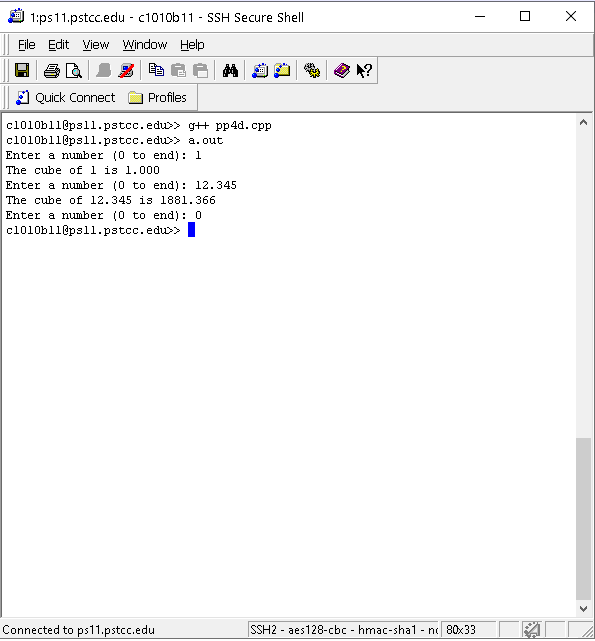
**// Function for cubing a base**

**double cube (double base)**

**{**

**return (base \* base \* base);**

**}**



4e (2 points)

**/\*File: pp4e.cpp**

**\* Author: Matthew Krahel and Blake Hodges**

**\* This program creates a function for**

**\* determining if a number is positive or**

**\* negative that is to be called**

**\* in the main function.**

**\*/**

**// Identifying the libraries and namespaces used in this program**

**#include <iostream>**

**using namespace std;**

**// Declare Functions**

**bool isPositive(double number);**

**// Begin Main Function**

**int main()**

**{**

**// Declare the variable**

**double number; //integer inputted by user**

**do {**

**// Request number from user**

**cout << "Enter number (0 to end): ";**

**// Applying the users inputted integer**

**cin >> number;**

**if (isPositive(number)){**

**cout << number << " is positive\n";**

**}**

**else{**

**cout << number << " is negative\n";**

**}**

**} while (number != 0);**

**return( 0 );**

**}**

**// Function for determining if an integer is positive or negative**

**bool isPositive(double number)**

**{**

**if (number >= 0){**

**return (true);**

**}**

**else {**

**return (false);**

**}**

**}**

