**Midterm**

**Key:**

**## - End user input**

\_\_\_\_ - System Output

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Program Instructions:

The cost of making a pizza at a local shop is as follows:

- Labor cost is $.75 per pizza, regardless of size

- Rent cost is $1.00 per pizza, regardless of size

- Materials is $.05\*diameter\*diameter

Create a application that prompts the user for the size of a pizza and then displays the cost of making the pizza. The application output should look similar to:

Program Output:

Enter the diameter of the pizza in inches: ##

The cost of making the pizza is: \_\_\_\_

/\*

\*Student

\*Comp. Sci.

\*Pd. 1

\*Pizza Cost Program

\*/

**\_\_\_\_\_\_\_\_\_\_\_\_1\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**import** java.text.NumberFormat;

 **public** **class** PizzaCost {

 **\_\_\_\_\_\_\_\_\_\_\_\_\_2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** {

 **double** laborCost = 0.75;

 **double** rentCost = 1.0;

 **int** diameter;

 **double** materials, totalCost;

 NumberFormat \_\_\_3\_\_\_ = NumberFormat.*get\_\_\_4\_\_\_\_Instance*();

 Scanner input = **new** \_\_\_\_\_\_\_\_\_\_\_5\_\_\_\_\_\_\_\_\_\_\_;

 System.*out*.print("Enter the diameter of the pizza in inches: ");

 \_\_\_6\_\_\_ = input.nextInt();

 \_\_\_\_\_7\_\_\_\_\_\_

 materials = \_\_8\_\_ \* diameter \* diameter;

 totalCost = laborCost + rentCost + \_\_\_9\_\_\_\_\_

System.*out*.println("The cost of making the pizza is: " + \_\_\_\_10\_\_\_\_(totalCost));

 }

 }

Program Instructions:

Create a Change application that prompts the user for an amount of pennies, and then displays the minimum number of coins necessary to make the change. The change should be made up of quarters, dimes, nickels, and pennies.

Program Output:

Enter the change in cents: ###

The minimum number of coins is:

Quarters: \_\_

Dimes: \_\_

Nickels: \_\_

Pennies: \_\_

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\*Student

\*Comp. Sci.

\*Pd. 1

\*change Calc Program

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\_\_\_\_\_\_\_\_\_\_11\_\_\_\_\_\_\_\_\_\_\_\_

**public** **class** ChangeCalc {

 **\_\_\_\_\_\_\_\_\_\_12\_\_\_\_\_\_\_\_\_\_\_\_** {

 **int** quarters, dimes, nickels, pennies, change;

 Scanner input = **new** \_\_\_\_\_\_\_\_13\_\_\_\_\_\_\_\_;

 System.*out*.print("Enter the change in cents: ");

 \_\_\_\_\_\_\_\_\_14\_\_\_\_\_\_\_\_\_

 input.close();

 \_\_\_15\_\_\_ = (change / 25);

 \_\_\_16\_\_\_ = ((change % 25) / 10);

 \_\_\_17\_\_\_ = (((change % 25) % 10) / 5);

 \_\_\_18\_\_\_ = (((change % 25) % 10) % 5);

 \_\_\_\_\_\_\_\_\_\_\_\_19\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_("The minimum number of coins is:");

 \_\_\_\_\_\_\_\_\_\_\_\_19\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ("Quarters: " + quarters);

\_\_\_\_\_\_\_\_\_\_\_\_19\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ("Dimes: " + dimes);

\_\_\_\_\_\_\_\_\_\_\_\_19\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ("Nickels: " + nickels);

\_\_\_\_\_\_\_\_\_\_\_\_19\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (\_\_\_\_\_\_\_\_20\_\_\_\_\_\_\_\_\_);

 }

 }

Program Instructions:

Create a program that prompts an end user for the wave height and then displays:

“Great day for surfing!” when the waves are six feet or higher,

“Go body boarding!” when the waves are greater then or equal to thee feet,

“Go for a swim” when the waves are greater then or equal to zero and less than 3, and displays

“What kind of surf is that?” for all other wave heights.

Program Output (Example):

Enter the wave height: #9#

Great day for surfing!

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\*Student

\*Comp. Sci.

\*Pd. 1

\*Surfs Up

\*/

**\_\_\_\_\_\_\_\_\_\_21\_\_\_\_\_\_\_\_\_\_**;

**public** **class** SurfsUp3 {

 **\_\_\_\_\_\_\_\_\_\_\_22\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**{

 **int** waveHeight;

 Scanner input = **\_\_\_\_\_\_\_23\_\_\_\_\_\_\_\_**;

 System.*out*.print("Enter the wave height:");

 \_\_\_\_\_\_\_\_\_\_24\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_25\_\_\_\_\_\_

 **\_26\_** (\_\_\_\_\_\_27\_\_\_\_\_\_){

 System.*out*.print("Great day for surfing!");

 }**\_\_28\_\_** (\_\_\_\_29\_\_\_\_\_){

 System.*out*.print("Go body boarding!");

 }**\_\_30\_\_** (\_\_\_\_31\_\_\_\_\_){

 System.*out*.print("Go for a swim");

 }**\_\_32\_\_** {

 System.*out*.print("What kind of surf is that?");

 }

 }

}