CIST 2371, Spring 2018

Midterm

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1. ***[5 pts]:*** Character literals are enclosed in \_\_\_\_\_\_\_\_; string literals are enclosed in \_\_\_\_\_\_\_\_.

Answer: C

a. single quotes; single quotes

b. double quotes; double quotes

c. single quotes; double quotes

d. double quotes; single quotes

2. ***[5 pts]:*** What is the purpose of the following types of dialog boxes?

a. Message dialog

Answer: A Message Dialog box is used solely to tell the user something. IT may be that and error has occurred or the result of a program.

b. Input dialog

Answer: A Input Dialog Box is used solely to ask the user for some sort of input. Most common examples are asking a user for dimensions for a box or for some sort of number

3. ***[5 pts]:*** The if/else statement will execute one group of statements if its boolean expression is true or another group if its boolean expression is false.

\_\_\_\_\_\_\_\_.

Answer: True

a. False

b. True

4. ***[5 pts]:*** A for loop normally performs which of these steps?

a. initializes a control variable to a starting value

b. tests the control variable by comparing it to a maximum/minimum value and terminate when the variable reaches that value

c. updates the control variable during each iteration

d. all of the above

Answer: D

5. ***[5 pts]:*** Methods are commonly used to:

a. speed up the compilation of a program

b. break a problem down into small manageable pieces

c. emphasize certain parts of the logic

d. document the program

Answer: B

6. ***[10 pts]:*** What will be the following code output?

int apples = 0, bananas = 2, pears = 10;

apples += 10;

bananas \*= 10;

pears /= 10;

System.out.println(apples + " " + bananas + " " + pears);

Answer: 10 20 1

7. ***[10 pts]:*** What will be the following code output?

String message = "Have a great day!";

System.out.println(message.toUpperCase());

System.out.println(message);

Answer: HAVE A GREAT DAY!

Have a great day!

8. ***[20 pts]:*** Word game (60 point)

Write a program that plays a word game with the user. The program should ask the user to enter the following:

His or her name

His or her age

The name of a city

The name of a college

A profession

A type of animal

A pet’s name

After the user has entered these items, the program should display the following story, inserting the user’s input into the appropriate locations:

There once was a person named **NAME** who lived in **CITY**. At the age of **AGE, NAME**

went to college at **COLLEGE**. **NAME** graduated and went to work as a **PROFESSION**.

Then, **NAME** adopted a(n) **ANIMAL** named **PETNAME**. They both lived happily ever

after!

package butler\_midtermexam\_pt1;

import java.util.Scanner;

public class Butler\_MidtermExam\_pt1 {

public static void main(String[] args) {

String name;

String input;

int age;

String city;

String college;

String proffesion;

String animal;

String animalName;

Scanner keyboard = new Scanner(System.in);

System.out.println("Welcome to the word game program.");

System.out.print("Please enter your name. ");

name = keyboard.nextLine();

System.out.print("\nPlease enter your age. ");

input = keyboard.nextLine();

age = Integer.parseInt(input);

System.out.print("\nPlease enter the name of a city. ");

city = keyboard.nextLine();

System.out.print("\nPlease enter the name of a college. ");

college = keyboard.nextLine();

System.out.print("\nPlease enter a proffesion. ");

proffesion = keyboard.nextLine();

System.out.print("\nPlease enter a type of animal. ");

animal = keyboard.nextLine();

System.out.print("\nPlease enter a pet's name. ");

animalName = keyboard.nextLine();

System.out.println("\n\nThere once was a person named " + name + " who lived in " + city + ". At the age of " + age + ", " + name + " went to college at " + college + ".");

System.out.println(name + " graduated and went to work as a " + proffesion + ". Then, " + name + " adopted a(n) " + animal + " named " + animalName + ". They both lived happily ever after!");

}

}

9. ***[20 pts]:*** Shipping Charges : The Fast Freight Shipping Company charges the following rates:

**Weight of Package Rate per 500 Miles Shipped** 

2 pounds or less  $1.10

Over 2 pounds but not more than 6 pounds $2.20

Over 6 pounds but not more than 10 pounds $3.70

Over 10 pounds $3.80

The shipping charges per 500 miles are not prorated. For example, if a 2-pound package is shipped 550 miles, the charges would be $2.20. Write a program that asks the user to enter the weight of a package and then displays the shipping charges.

package Butler\_MidtermExam\_pt2;

import java.util.Scanner;

public class Butler\_MidtermExam\_pt2 {

public static void main(String[] args) {

double weight;

double sCharge;

Scanner keyboard = new Scanner(System.in);

System.out.println("Hello and welcome to the Shipping charges program. This program will calculate the shipping charge based on the weight of your package.");

System.out.print("\nPlease enter the weight of your package. ");

weight = keyboard.nextDouble();

System.out.println("You entered a weight of " + weight);

if(weight <= 2){

sCharge = weight \* 1.10;

System.out.println("Shipping charge for weight of " + weight + " is $" + sCharge);

}

else if(weight > 2 && weight <= 6){

sCharge = weight \* 2.20;

System.out.println("Shipping charge for weight of " + weight + " is $" + sCharge);

}

else if(weight > 6 && weight <= 10){

sCharge = weight \* 3.70;

System.out.println("Shipping charge for weight of " + weight + " is $" + sCharge);

}

else if(weight > 10){

sCharge = weight \* 3.80;

System.out.println("Shipping charge for weight of " + weight + " is $" + sCharge);

}

}

}

10. ***[15 pts]:*** Write a program that uses the while loop to print “Hello” five times.

Method call statements may be used in control structures like loops, if statements, and switch statements. Write a program that places the displayMessage method call inside a for loop.

package butler\_midtermexam\_pt3;

public class Butler\_MidtermExam\_pt3 {

public static void main(String[] args) {

for(int x = 0; x < 5; x++){

displayMessage();

}

}

public static void displayMessage(){

System.out.println("Hello.");

}

}

**Extra Point**

11. ***[20 pts]:*** Largest and Smallest

Write a program with a loop that lets the user enter a series of integers. The user should enter −99 to signal the end of the series. After all the numbers have been entered, the pro- gram should display the largest and smallest numbers entered.