CS 1301

Name:

Exam2

40pts

1. Consider the following code snippet:

int userInput = input.nextInt();

int score = 0;

switch(userInput % 2){

case 0:

score = userInput \* 5;

break;

case 1:

score = userInput + 5;

break;

}

System.out.printf(“Score: %d”, score);

1. What value(s) would the user have to enter to get an output of Score: 20? (2pts)

4, 15

1. What value(s) would the user have to enter to get an output of Score: 0? (2pts)

0, -5

1. What output is produced by the following code fragment? (6pts)

String s1 = "Java is fun";

String s2;

int size = s1.length();

System.out.println (size); // 11

System.out.println (s1.charAt(3)); // a

s2 = s1.substring (2,4);

System.out.println (s2); // va

System.out.println(s1.toUpperCase()); // JAVA IS FUN

3. Write a program to read a String x and to print the last character of the String x? (5pts)

import java.util.Scanner;

public class Q3

{

public static void main(String [] args)

{

Scanner input = new Scanner(System.in);

String str = input.nextLine();

if (str.length() > 0)

System.out.println(str.charAt(str.length()-1));

else

System.out.println("Empty String ...");

}

}

4. Suppose income is 4001, what is the output of the following code: (2pts)

if (income > 3000)

System.out.println("Income is greater than 3000");

else if (income > 4000)

System.out.println("Income is greater than 4000");

else

System.out.println("Income is less than 3000");

Income is greater than 3000

5. What will be the output of the following Java methods: (5pts)

1. Math.pow(3, 2) // 9.0
2. Math.ceil(-3.1) // -3
3. Math.floor(-6.1) // -7
4. Math.abs(-2.1) // 2.1
5. Math.rint(3.5) // 4.0

6. Write a Java program that takes lottery ticket. A lottery ticket has three integer numbers. Each number is one of 0, 1, or 2. User input the three numbers. If they are all the value 2, the result is 10. Otherwise if they are all the same, the result is 5. Otherwise so long as both the second number and the third number are different from the first number, the result is 1. Otherwise the result is 0. The program prints out the result. (9pts)

import java.util.Scanner;

public class Q6

{

public static void main(String [] args)

{

Scanner input = new Scanner(System.in);

int a, b, c;

while(true)

{

System.out.println("Enter three integer numbers valued 0, 1, or 2: ");

a = input.nextInt();

b = input.nextInt();

c = input.nextInt();

if ( a < 0 || a > 2) continue;

if ( b < 0 || b > 2) continue;

if ( c < 0 || c > 2) continue;

if (a == 2 && b == 2 && c == 2)

System.out.println(10);

else if (a == b && b == c)

System.out.println(5);

else if (a != b && a != c)

System.out.println(1);

else

System.out.println(0);

break;

}

}

}

1. Write a program that asks the user for a 3-digit integer and checks to see if the integer is a palindrome or not. You can assume the user will always enter a 3-digit integer. (9pts)

import java.util.Scanner;

public class Q7

{

public static void main(String [] args)

{

Scanner input = new Scanner(System.in);

int num = input.nextInt(); //assume alawys enter a three-digit number

if (num/100 == num%10)

System.out.println("palindrome");

else

System.out.println("Not a palindrome");

}

}