CSC-120 Project 3 - Java Programming Competition Sol Ben-Ishay

I affirm that I have carried out my academic endeavours with full academic honesty. [Sol Ben- Ishay]

Question 1 - Short Answer:

Create a program StairCaseBuilder that takes an integer n as a scanner input and prints a staircase of size n using the pound symbol, #. The output of the program should look like:

Enter the size of the staircase: 5

#

##

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Solution:

import java.util.Scanner; public class StairCaseBuilder {

static void buildStaircase(int size) { int counter=0;

for(int i=0; i < size;i++) { counter++;

for(int k=size; k>= i;k--) { System.out.print(" ");

}

for(int j=0; j<=counter-1;j++) { System.out.print("#");

}

System.out.print("\n");

}

}

public static void main(String[] args) {

Scanner scnr = new Scanner(System.in); System.out.print("Enter the size of the staircase: "); int size = scnr.nextInt();

buildStaircase(size); scnr.close();

}

}

Question 2 - Multiple Choice/Fill in the Blank

Evaluate the following Java expression, if x=3, y=5, and z=10:

**++z + y - y + z + x++**

1. 26
2. 24
3. 20
4. 25

Answer : b, 24

Question 3 - Multiple Choice/Fill in the Blank

Which of the following is the proper way to declare and initialize an int array, intArray of size n?

1. int intArray[] = new int[n];
2. int[] intArray = new int[:n];
3. int [] intArray = new int[n];
4. int[] intArray = new int[n];

Answer: d, int[] intArray = new int[n];

Question 4 - Multiple Choice/Fill in the Blank

Complete the missing lines of code below to print out the sum of the inputted integer array:

class Sum {

static int arr[] = {12,3,4,15}; static int sum() {

int sum = 0; int i;

"FILL IN HERE"

"FILL IN HERE"

}

return sum;

}

public static void main(String[] args) { System.out.println("Sum of given array is " + sum());

}

}

Answer:

class Sum {

static int arr[] = {12,3,4,15}; static int sum() {

int sum = 0; int i;

for (i = 0; i < arr.length; i++) { sum += arr[i];

}

return sum;

}

public static void main(String[] args) { System.out.println("Sum of given array is " + sum());

}

}