CSCI 111, Fall 2017

Test 2 (30pts)

Your name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What are the first and last positions of this array: (1pt)

int[] xyz = new int[50];

Answer: first = 0, last = 49

2. What code will tell you the number of elements in some array called arr? (1pt)

Answer: arr.length

3. Fill in the following blanks so that the loop sets an int k to the values -10, -8, -6, ..., 6, 8, 10. (3pts)

for(\_\_\_\_\_\_\_\_\_\_\_\_\_\_; \_\_\_\_\_\_\_\_\_\_\_\_\_\_; \_\_\_\_\_\_\_\_\_\_\_\_\_\_)

Answer: for(int k = -10; k <= 10; k = k + 2)

OR:

for(int k = -10; k < 11; k = k + 2)

4. Assume we have:

char q;

int w;

float[] fs;

String[] words;

boolean y;

What **type** are the following? Write your answer next to each expression. When the answer is some kind of array, write “array” (not “collection” and not “[]”) **as well as the type**, e.g., “boolean array.” (6pts)

* Y - boolean
* fs[1] - float
* words[w+1] - String
* fs – float array
* words – String array
* w - int

5. Write a for() loop that computes the product (multiplication) of the numbers 500, 495, 490, ..., 10, 5. Save the product into a variable called “product”. (6pts)

Answer:

int result = 1;

for(int k = 500; k > 0; k = k - 5)

{

result = result \* k;

}

6. Create an array of size 500 and put random float values between 0 and 1 in it. Every one of the 500 values should be random, between 0 and 1. (5pts)

Answer:

float[] values = new float[500];

for(int i = 0; i < 500; i++)

{

values[i] = random(0, 1);

}

7. Write code that adds all the values **greater than 0** that are found in an integer array called “vals” that has 100 elements. **Do not create the array, assume it exists.** Finally, print the sum of all the values. (8pts)

Answer:

int result = 0;

for(int i = 0; i < 100; i++)

{

if(vals[i] > 0)

{

result = result + vals[i];

}

}

print(result);