

CSE1322 Test 3 Practice Test

Test 3 will cover modules 1-9 (it is cumulative). The questions in the test will present multiple choice answers. You can make up your own possible answers below:

Question 1:

What is the output of the following code:

```
int i=2;
int y=10;
while(i<15) {
    i+=2;
    y+=i;
}
Println(y);
}
```

Question 2:

What is the output of the following code?

//Java:

```
boolean happy=true;
int z=7;

for(int i=0;i<5;i++) {
    if(i%2==0) {
        happy=!happy;
    }
    z+=1;
}

if((z>13) && (happy)) {
    System.out.println("Yes!");
}
else {
    System.out.println("No!");
}
}
```

//C#:

```
bool happy=true;
int z=7;

for(int i=0;i<5;i++) {
    if(i%2==0) {
        happy=!happy;
    }
    z+=1;
}

if((z>13) && (happy)) {
    Console.WriteLine("Yes!");
}
else {
    Console.WriteLine("No!");
}
}
```


Question 6:

What is the output of this code:

```
class JustNumber {
    public char x='c';
}

class Main {
    public static void changeX(char x) {
        x++;
    }

    public static void changeJustNum(JustNumber x) {
        x.x++;
    }

    public static void main(String[] args) {
        char x='a';
        changeX(x);
        Println("X is "+x);

        JustNumber a=new JustNumber();
        changeJustNum(a);
        Println("Other x is "+a.x);
    }
}
```

Question 7:

What is the output of the following code:

Java	C#
<pre>class Main { public static int a(int x) { return 2; } public static int a(char x) { if(x=='a') { return 8; } else { return 9; } } public static void main(String[] args) { int answer=a(3)+a('b'); System.out.println(answer); } }</pre>	<pre>using System; class Program { public static int a(int x) { return 2; } public static int a(char x) { if(x=='a') { return 8; } else { return 9; } } public static void Main (string[] args) { int answer=a(3)+a('b'); Console.WriteLine(answer); } }</pre>

Question 8:

Given the following code:

```
class X {  
    private int a=7;  
  
    protected int getA() {  
        return a;  
    }  
}
```

Question 9:

What is the name of the parent class for class X?

```
class X {  
    private int a=7;  
  
    public void setA(int a) {  
        this.a=a;  
    }  
}
```

Question 10:

Is the following valid?

```
abstract class X {  
    public int methodA() {  
        return 3;  
    }  
  
    public abstract int methodB() {}  
}
```

Question 11:

What is the difference between an overloaded method and an overridden method?

Question 12:

What does the following code output:

```
class oneClass {
    public int x;

    public oneClass() {
        x=5;
    }

    public char x() {
        return 'A';
    }
}

class Main {
    public static void main(String[] args) {
        int x=2;
        OneClass y = new OneClass();

        print(x);
        print(y.x);
        print(y.x());
    }
}
```


Question 13:

What is the output of the following code?

Java

```
class X {  
    private int a;  
  
    public X(int b) {  
        a=b;  
    }  
}
```

```
X(10)  
public i
```

C#

Question 14:

What is the output of the following code?

Java

```
class Main {
    public static int a(int myNum){
        if (myNum < 1) {
            return 4;
        }
        else {
            return myNum + a(myNum-3);
        }
    }

    public static void main(String[] args) {
        System.out.println(a(5));
    }
}
```

C#

```
using System;

class Program {
    public static int a(int myNum){
        if (myNum < 1) {
            return 4;
        }
        else {
            return myNum + a(myNum-3);
        }
    }

    public static void Main (string[] args) {
        Console.WriteLine(a(5));
    }
}
```

Question 15:

What line is miss*Numva

Question 16:

What is the output of the following code?

Java	C#
<pre>class Main { public static void do_stuff() { int[] myNums = new int[10]; for(int i=0;i<=10;i++) { myNums[i]=i; } } public static void main(String[] args) { try { do_stuff(); System.out.println("A"); } catch(Exception e) { System.out.println("B"); } } }</pre>	<pre>using System; class Program { public static void do_stuff() { int[] myNums = new int[10]; for(int i=0;i<=10;i++) { myNums[i]=i; } } public static void Main (string[] args) { try { do_stuff(); Console.WriteLine("A"); } catch(Exception e) { Console.WriteLine("B"); } } }</pre>

Question 17:

Given the following code:

Java	C#
<pre>class Main { public static void do_stuff(int x) throws Exception { int[] myArray=new int[10]; if(x<0) { throw new Exception("X<0"); } else { for(int i=0;i<=x;i++) { myArray[i]=i+x; } } System.out.println(myArray[x]); } public static void main(String[] args) { try { do_stuff(-1); //Line 1 do_stuff(9); //Line 2 do_stuff(10); //Line 3 } catch(IndexOutOfBoundsException e) { System.out.println("Error 1"); } catch(Exception e) { System.out.println("Error 2"); } } }</pre>	<pre>using System; class Program { public static void do_stuff(int x) { int[] myArray=new int[10]; if(x<0) { throw new Exception("X<0"); } else { for(int i=0;i<=x;i++) { myArray[i]=i+x; } } Console.WriteLine(myArray[x]); } public static void Main (string[] args) { try { do_stuff(-1); //Line 1 do_stuff(9); //Line 2 do_stuff(10); //Line 3 } catch(IndexOutOfRangeException e) { Console.WriteLine("Error 1"); } catch(Exception e) { Console.WriteLine("Error 2"); } } }</pre>

What is the output of the code?

Question 18:

If you comment out Line 1 in the previous code, then what is the output of that code?

Question 19:

What is the content of a.txt after the following code executes?

Java	C#
<pre>import java.io.*; class Main { public static void write_file(String filename, String line, int x) { try { File myFile=new File(filename); PrintWriter theFile = new PrintWriter(myFile); for(int i=0;i<x;i++) { for(int j=0;j<x;j++) { theFile.print(line+" "); } theFile.println(); } theFile.close(); } catch(IOException e) { System.out.println("Error writing file: "+e.getMessage()); } } public static void main(String[] args) { write_file("A.txt","Test",4); } }</pre>	<pre>using System; using System.IO; class Program { public static void write_file(String filename, String line, int x) { try { StreamWriter theFile = new StreamWriter(filename); for(int i=0;i<x;i++) { for(int j=0;j<x;j++) { theFile.Write(line+" "); } theFile.WriteLine(); } theFile.Close(); } catch(IOException e) { Console.WriteLine("Error writing file: "+e.Message); } } public static void Main (string[] args) { write_file("A.txt","Test",4); } }</pre>

Question 20:

What line is missing below, if this code is to read a file A.txt and print it to the screen?

Java

C#

Question 21:

Java	C#
<pre> class DoStuff implements Runnable { public void run() { System.out.println("Running"); } } class Main { public static void main(String[] args) { DoStuff myStuff=new DoStuff(); Thread x = new Thread(myStuff); //What's missing here? } } </pre>	<pre> using System; using System.Threading; class DoStuff { public void run() { Console.WriteLine("Running"); } } class Program { public static void Main (string[] args) { DoStuff myStuff=new DoStuff(); ThreadStart myTS=new ThreadStart(myStuff.run); Thread x=new Thread(myTS); //What's missing here? } } </pre>

How do you correctly start the thread x?

Question 22:

What is the difference between an interface and an abstract class?

Question 23:

What does this return:

```

class Main {
    public static void main(String[] args) {
        float y=54.2f;
        char x = (char)y;

        Print(x);

    }
}

```

Question 24:

Where is 0,0 in a graphical window?

Question 25:

What color is represented by 0000FF?

Question 26:

When does an event happen in a GUI?

Question 27:

What is the advantage of a linked list over an ArrayList/List?

Question 28a:

True/False:

It will take the same amount of time to find a random item in an array, as it will a linked list?

Question 28b:

What if both the array and linked list are sorted. Does that change the answer?

Question 28c:

Is it faster to get an item out of a BST or a sorted array?

Question 28d:

Which is faster to insert into:

- a) Unsorted Array
- b) Sorted Array
- c) Unsorted Linked List
- d) Sorted Linked List
- e) BST

Question 29:

Given the following linked list:



What is the value of head.next.next.data?