After invoking following code, value of a, c are ?

```
int x = 182;
int a, c;
c = x / 100;
a = x % 10;
```

Which expression can get max value from x & y

a) x > y ? y : x; b) x < y ? y : x; c) x > y ? x + y : x - y; d) x = = y ? y : x;

What is the output after running the code?

```
StringBuffer buffer = new StringBuffer(“hello2024”);
buffer.insert(7, “@“);
System.out.println(buffer.toString());
```

Read code, when method run, the correct output is ?

```
public class Point {
	public void method() {
		int x = 6, y = 8;
		System.out.print(“(“ + x + “,” + y + “)”);
		switchCoords(x, y);
		System.out.print(“(“ + x + “,” + y + “)”);
	}

	public void switchCoords(int x, int y) {
		int temp;
		temp = x;
		x = y;
		y = temp;
		System.out.print(“(“ + x + “,” + y + “)”);
	}

}
```

Read code, when method run, the correct output is ?

```
int[] arr = {122, 33, 55, 678, -987};
int max = arr[0];
for (int i = 1; i <= arr.length; i++) {
	if (arr[i] > max) {
		max = arr[i];
	}
}
System.out.println(max);
```

What is the value of k after code run ?

```
int x = 2, y = 5, k = 0;
switch(x % y) {
	case 0 -> k = x+y;
	case 1 -> k = x -y;
	case 2 -> k = x * y;
	default -> k = x / y;
}
```

What is the value of k after code run ?

```
int x = 2, y = 5, k = 0;
switch(x % y) {
	case 0 : k = x+y;
	case 1 : k = x -y;
	case 2 : k = x * y;
	default : k = x / y;
}
```

Read code, when method run, the correct output is ?

```
public class MyClass {
	static int x = 10;
	public static void main(String[] args) {
		for (int n = 3; n > 0; n- -) {
			x *= x;    // x = x * x
		}
		System.out.println(x);
	}
}
```

Read code, how many times would statement a = a + 1; execute ?

```
public class Test {
	public static void main(String[] args) {
		int x = 8, a = 1;
		do {
			a = a + 1;
		} while (x > 0);
	}
}
```

How many objects are created when following code run ?

```
int[] a = new int[10];
String b = “abc”;
String c = new String(“abc”);
MyTest test = new MyTest();
String[] words = new String[10];
```

Find errors from code below;

```
Int count;    //1
int x[] = new int[10];  //2
for (int i = 0; i < 5 i++;) {   //3
      count++       //4
}
System.out.print(x[5]);   //5
```

Write the expression to get the middle digit of a 3-digits integer;

Suppose x = 1, y = 2, z = 3; What is the value of y —> y += z - - / ++x ;

After running following code, values of a, b c are …?

```
int a = 6, b = 8;
boolean c;
c == a > b && ++a == - -b;

c =   a > b && ++a == - -b;
```

What are the values of a b c d, after running following code;

```
int a = 100;
int b = 50;
int c = a -- - b;
int d = a - --b;
```

Use the ternary operator to find the largest of any three numbers.

Write code to get the union & intersection of 2 strings “Hello” & “Java”

What is the output after running following code?

```
int[] arr = { 1, 0, 3, 0, 0, 5};
int sum = 0;
int i = 0;
for (int i = 0; i < arr.length; i++) {
	if (arr[i] == 0) {
		sum -= 1;
	} else {
		sum += arr[i];
	}
}
System.out.println(sum);
```

What is the output after running following code?

```
int i = 0;
try{
	i++;
	throw new IOException();
} catch (IOException e) {
	i++;
} catch (Exception e) {
	if (i != 0) {
		i++;
	}
} finally {
	i++;
}
i++;
System.out.print(i);
```

Read code and answer questions?

```
ArrayList<Integer> answers = new ArrayList<>();
ArrayList<Integer> temp = new ArrayList<>();
answers.add(3);
answers.add(2);
answers.add(-5);
answers.add(2, 4);
int a = answers.get(2);
int b = answers.get(3);
answers.remove(2);
answers.remove(1);
int c = answers.lastIndexOf(2);
boolean d = answers.contains(3);
temp.add(3);
temp.add(-5);
boolean e = answers==temp;
```

Which one is true?

(1) a == 4 (2) b == -5 (3) c == -1 (4) d == true (5) e == true

Read code answer question:

```
    public static int[] method(int[] arr) {
      int[] temp = new int[arr.length];
      int n = 0;
      for (int t : arr) {
         temp[n] = t;

         n++;

      }

      for (int i = 0, j = 0; i < arr.length; i++, j++) {
         if (j >= arr.length) {   //
            return temp;
         }
         if (arr[i] == 0) {
            temp[j] = 0;
            j++;
            temp[j] = 0;
         } else {
            temp[j] = arr[i];
         }

         }

}
```

What is the output for following program:

```
class Base {
    public void show() {
        System.out.println("Base::show() called");
    }
}

class Derived extends Base {
    public void show() {
        System.out.println("Derived::show() called");
    }
}

public class Main {
    public static void main(String[] args) {
        Base b = new Derived();
        b.show();
    }
}
```

What is the output for following program:

```
class Base {
    final public void show() {
        System.out.println("Base::show() called");
    }
}

class Derived extends Base {
    public void show() {
        System.out.println("Derived::show() called");
    }
}

class Main {
    public static void main(String[] args) {
        Base b = new Derived();;
        b.show();
    }
}
```

What is the output for following program:

```
public class Test
{
   public int getData()
   {
      return 0;
   }
   public long getData()
   {
      return 1;
   }
   public static void main(String[] args)
   {
      Test obj = new Test();
      System.out.println(obj.getData());
   }
}
```

What is the output for following program:

```
public class Test
{
   private String function(String temp, int data)
   {
      return ("1");
   }
   private String function(int data, String temp)
   {
      return (“2");
   }
   public static void main(String[] args)
   {
      Test obj = new Test();
      System.out.println(obj.function(4, "HY"));
   }
}
```

What is the output?

```
int j = -1;
if (j > 0 || 1 / (j + 1) > 10) {
    System.out.println("True branch");
} else {
    System.out.println("False branch");
}
```

What is the output?

```
int[] arr = {1, 8, 4, 11, 7, 14, 10};
int x = arr[6];
for (int i = 0; i < arr.length && arr[i] <= x; i++) {
    if (arr[i] % 2 == 0) {
        System.out.print(i + " ");
    }
}
```

What is the output?

```
boolean[] arr = new boolean[4];
arr[0] = true;
arr[1] = arr.length > 4 ? true : false;
System.out.printf("%b %b %b", arr[0], arr[1], arr[3]);
```

What is the output?

```
int arr[] = { 1, 2, 3, 4, 5};
arr[4] = arr[4] * 2;
int total = 0;
for (int value: arr) {
    total += value;
}
System.out.println(total);
```

What is the output?

```
public class TestClass {
   int x;
   public static void main(String[] args) {
      TestClass object;
      System.out.println(object.x);
   }
}
```

Select all statements that are true regarding abstract classes.

1. Subclasses can access their private methods by name;
2. They can have constructors;
3. Subclasses inherit their private variables and methods;
4. They can be instantiated;

Select all statements that are true regarding interfaces.

1. Interfaces add flexibility and re-usability for software components.
2. An interface is a reference type in Java.
3. Interfaces are classes.
4. Methods in an interface are public implicitly.

In the code below, the Triangle class is a child class of the Shape class. The Shape class declares a non-static method draw() which will draw a square to screen. The Triangle class also declares a non-static method draw() which will draw a triangle onto screen. Pick the statement that best applies from the list.

```
public class TestClass {
   public static void main(String[] args) {
      ArrayList<Shape> shapes = new ArrayList<Shape>();
      shapes.add(new Shape());
      shapes.add(new Triangle());
      for (Shape shape: shapes) {
         shape.draw();
      }
   }
}
```

1. The code will draw 2 squares onto screen.
2. The code will draw a square and then a triangle onto screen.
3. The code will not compile because ArrayList only takes Shape objects, but we are trying to a Triangle object to it as well.
4. The code will draw 2 triangles onto screen.

The following piece of code is stored in a file named TestException.java. What is the output of this program if it is run by typing the following command: javac TestException.java; java TestException

```
public class TestException {
  public static void main(String[] args) {
    while (true) {
      try{
        throw new Exception();
      } catch (Exception e) {
        System.out.println("An exception is caught"); break;
      } finally {
        System.out.println("Inside the finally block");
      }
    }
    System.out.println("Before exiting");
  }
}
```

1. Before exiting
2. An exception is caught Before exiting
3. An exception is caught Inside the finally block
4. An exception is caught Inside the finally block Before exiting

The following piece of code is stored in a file named TestException.java. What is the output of this program if it is run by typing the following command: javac TestException.java; java TestException

```
public class TestException {
  public static void main(String[] args) {
    while (true) {
      try{
        // nothing wrong here
      } catch (Exception e) {
        System.out.println("An exception is caught”); break;
      } finally {
        System.out.println("Inside the finally block");
      }
    }
    System.out.println("Before exiting”);
  }
}
```

1. The program run into a infinite loop with no message
2. The message “Inside the finally block” is printed in an infinite loop
3. Before exiting
4. An exception is caught Inside the finally block Before exiting

Consider the code that uses inheritance below, and select the most correct statement.

```
public class Shape {}

public class Rectangle extends Shape {}

public class Square extends Rectangle {}
```

A Rectangle is a Square and also a Shape.
A Square is a Rectangle but not a Shape.
Such inheritance is not allowed in Java.
A Rectangle is a Shape but not a Square.

Select all statements that are true regarding Generics.

1. Generic programming with a type parameter enables code to be written that applies to any class.
2. Using Generics, classes and methods can have a type parameter
3. Once a generic class is compiled, it can be used like any other class
4. A generic class definition cannot have more than one type parameter

Select all statements that are true regarding input and output streams.

1. System.out & System.err are output streams.
2. A stream is an object that enables the flow of data between a program and some input/output devices or file. If the data flows out of program, then the streams is called input stream.
3. Input streams can flow from the keyboard or from a file.
4. A stream is an object that enables the flow of data between a program and some input/output devices or file. If the data flows into a program, then the streams is called input stream.

```
Given class Engine {
        private boolean isInitialized = true;
         public static boolean isInitialized() {
                return this.isInitialized;
        }
}
```

1. The code will compile and run without a problem, but an object of the class must be created before the isInitialized method is called.
2. The code will not compile because isInitialized is a static method, and it cannot access a non-static instance variable.
3. The code will compile and run without a problem, when the isInitialized method is called true will be returned.
4. The code will compile and run without a problem, when the isInitialized method is called false will be returned.

What is the most probable cause of a NullPointerException?

1. using an object that has not been instantiated.
2. trying an illegal type cast.
3. referencing a file that cannot be located.
4. exhausting all available memory.

What is the output ?

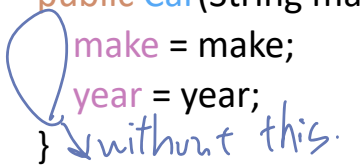
```
double[] arr = new double[4];
arr[0] = 1.0;
arr[1] = 4.0;
System.out.println(arr[0] + arr[1] + arr[2]);
```

What is the output ?

```
public class Car {
    private String make;
    private int year;
    public Car() {
        make = "Fiat";
        year = 2021;
    }
    public Car(String make, int year) {
        this.make = make;
        this.year = year;
    }
    public String toString() {
        return make + " " + year;
    }
    public static void main(String[] args) {
        Car aCar = new Car("Kia", 2024);
        System.out.println(aCar);
    }
}
```

What is the output ?

```
public class Car {
    private String make;
    private int year;
    public Car() {
        make = "Fiat";
        year = 2021;
    }
    public Car(String make, int year) {
        make = make;
        year = year;
    }
    public String toString() {
        return make + " " + year;
    }
    public static void main(String[] args) {
        Car aCar = new Car("Kia", 2024);
        System.out.println(aCar);
    }
}
```



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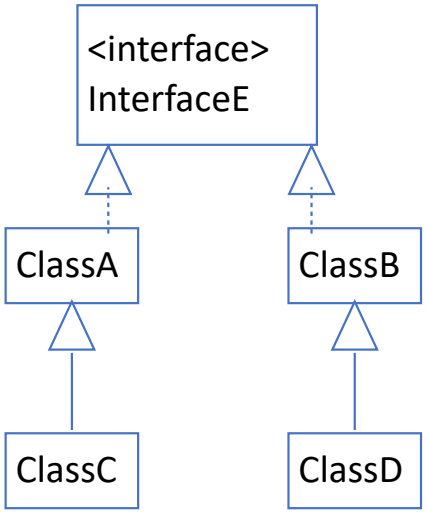
Given the following definition of class Base & Derived. What is the output of following statements?

```
public class Base {
    public void method1() {
        System.out.println("A");
        method2();
    }
    public void method2() {
        System.out.print("B");
    }
}
public class Derived extends Base {
    public void method1() {
        super.method1();
        System.out.print("C");
    }
    public void method2() {
        super.method2();
        System.out.print("D");
    }
}
```

```
Base object = new Derived();
object.method1();
```

ABDC

Given the UML diagram below. choose all correct implementations.



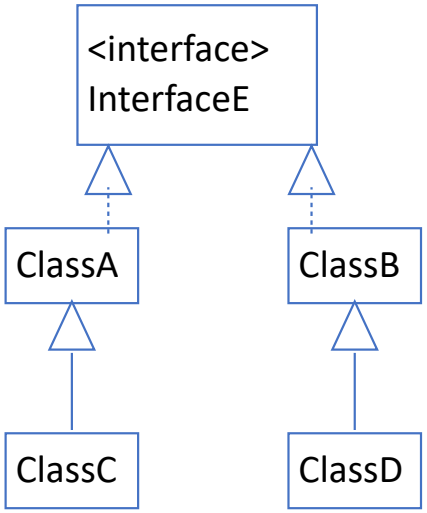
1) .public interface InterfaceE {…}
public class ClassA implements InterfaceE {…}
public class ClassB implements InterfaceE {…}
public class ClassC extends ClassA {…}
public class ClassD extends ClassB {…}

2) .public interface InterfaceE {…}
public class ClassA extends InterfaceE {…}
public class ClassB extends InterfaceE {…}
public class ClassC implements ClassA {…}
public class ClassD implements ClassB {…}

3) .public interface InterfaceE {…}
public class ClassA extends InterfaceE {…}
public class ClassB extends InterfaceE {…}
public class ClassC extends ClassA {…}
public class ClassD extends ClassB {…}

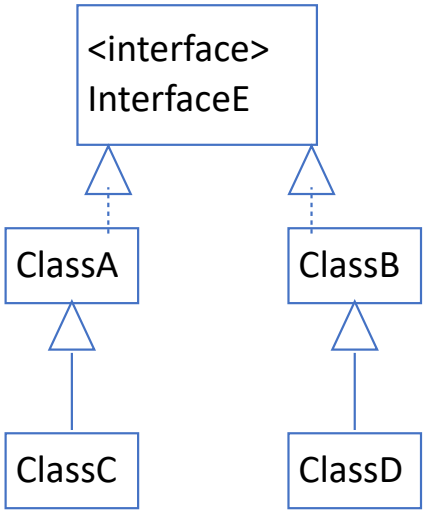
4) .public interface InterfaceE {…}
public class ClassA implements InterfaceE {…}
public class ClassB implements InterfaceE {…}
public class ClassC implements ClassA {…}
public class ClassD implements ClassB {…}

Given the UML diagram below. choose all correct statements.



1. ClassC extends ClassA and ClassD extends ClassB
2. Both ClassA and ClassB implements InterfaceE
3. ClassC implements ClassA & ClassD implements ClassB
4. Both ClassA and ClassB extends InterfaceE

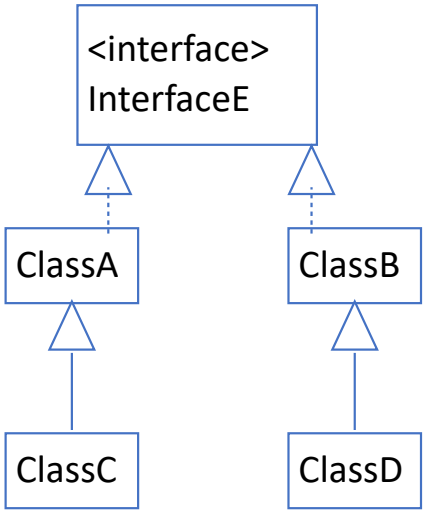
Given the UML diagram below. choose all expressions that evaluate ‘true’.




```
ClassA objA = new ClassA();
ClassA objA2 = objA;
ClassA objA3 = new ClassA();
ClassC objC = new ClassC();
ClassD objD = new ClassD();
```

1. objC instanceof InterfaceE
2. objD instanceof ClassB
3. objA2 == objA
4. objC instanceof ClassA
5. objA == objA3

Given the UML diagram below. choose all code blocks that will introduce compilation errors.



1) .ArrayList<InterfaceE> aList = new ArrayList<InterfaceE>();
aList.add(new ClassA());
aList.add(new ClassB());
aList.add(new ClassC());
aList.add(new ClassD());

2) .ArrayList<ClassA> aList = new ArrayList<>();
aList.add(new ClassA());
aList.add(new ClassB());
aList.add(new ClassC());
aList.add(new ClassD());

3) .ArrayList<InterfaceE> aList = new ArrayList<InterfaceE>();
aList.add(new ClassA());
aList.add(new ClassA());
aList.add(new ClassB());
aList.add(new ClassB());

4) .ArrayList<ClassC> aList = new ArrayList<>();
aList.add(new ClassA());
aList.add(new ClassC());

Choose all unhandled exceptions that could cause the following program to terminate.

```
public class TestFileReadingExceptions {
   public static void main(String[] args) {
      Scanner inputStream = null;
      try{
         inputStream = new Scanner(new FileInputStream(args[1]));
      } catch (FileNotFoundException e) {
         System.out.println("File not found");
      }
      while (inputStream.hasNextLine()){
         String line = inputStream.nextLine();
         int number = Integer.parseInt(line);
         System.out.println(number);
      }
      inputStream.close();
   }
}
```

1. ArrayIndexOutOfBoundsException 2. NumberFormatException 3. FileNotFoundException
4. NullPointerException 5. ClassCastException

```
public class TestClass {
   private String str = "a";
   public void methodA() {
      try{
         str += "b";
         methodB();
      } catch (Exception e) {
         str += "c";
      }
   }
   public void methodB() throws
      try{
         str += "d";
         methodC();
      } catch (Exception e) {
         throw new Exception();
      } finally {
         str += "e";
      }
      str += "f";
   }
```

```
public void methodC() throws Exception {
      throw new Exception();
   }
   public void display() {
      System.out.println(str);
   }

   public static void main(String[] args) {
      TestClass aTest = new TestClass();
      aTest.methodA();
      aTest.display();
   }
}
```

a b d e f c

Which snippet you should insert into the header of the inner loop to print following pattern?

```
*
***
*****
*******
*********
for (int i = 0; i < 5; i++) {
        for (<insert code here>) {
                System.out.print(“*”);
        }
        System.out.println();
}
```

```
int j = 0; j >= i; j++
int j = 0; j <= i * 2; j++
int j = 0; j <i * 2; j--
int j = 0; j >= i; j--
```

which expression evaluates to ‘false’

8/4 == 2

8 > 4 || 8 < 5

8 % 10 == 0

5 % 2 == 1

Statement if (x < 0) y = x + 1; else y = x - 1; can be replaced by …?

1. y = x < 0 ? x + 1 : x - 1;
2. x < 0 ? y = x + 1 : y = x - 1;
3. y = if (x < 0) x : 0
4. can not rewrite this statement.

What does ‘overriding a method ‘ mean?

1. A never-ending loop within a method.
2. Different methods have the same name, but different signatures
3. The definition of an inherited method can be changed in the definition of a derived class so that it has a meaning in the derived class that is different from what it is in the base class.
4. The number of a parameters exceeds what is needed in the function body

```
public static void main(String[] args) {
   int x = 20;
   int count = 0;
   do {
      x = x - 2;
      count = count + 1;
   } while (x > 0);
}
```

What is the value of count?

1. 10
2. 80
3. 20
4. 40

```
public static void main(String[] args) {
   int x = 20;
   int count = 0;
   do {
      x = x - 2;
       for (int i = 0; i < x % 2; i++) {
              count = count + 1;
       }
   } while (x > 0);
}
```

What is the value of count?

1. 20
2. 0
3. 10
4. 5

What is the output?

```
public class TestDemo {
    public static void fuc1(int[] array){
        array = new int[]{1,2,3};
    }
    public static void fuc2(int[] array){
        array[0]=99;
    }
    public static void main(String[] args) {
        int[] array={5,6,7};
        fuc1(array);
        for (int i = 0; i < array.length; i++) {
            System.out.print(array[i]+" ");
        }
        System.out.println();
        fuc2(array);
        for (int i = 0; i < array.length; i++) {
            System.out.print(array[i]+" ");
        }
        System.out.println();
    }
}
```

1. 2. 3

99. 6. 7

What would be the output of the code snippet given below when the value of integer **'i'** is "**-3**"?

```
return i % 2 == 1;
```

This program below increments a variable **j** repeatedly and then prints its value. What will be the output?

```
public static void main(Strin
g[] args){
    int j = 0;
    for(int i = 0; i < 100; i
++)
        j = j++;
    System.out.println(j);
}
```

In the poor little program given below, the decision method returns both **true** and **false**. In not more than 2 lines write what is the **final output** that is printed and **why**?

```
public static void main(Strin
g[] args){
    System.out.println(decisi
on());
}

static boolean decision(){
    try {
        return true;
    }finally{
        return false;
    }
}
```

false

What will be the **output** of the following program:

```
public static void main(Strin
g[] args){
    try{
        System.out.println("H
ello world");
        System.exit(0);
    }finally{
        System.out.println("G
oodbye world");
    }
}
```

```
public class Confusing{
    private Confusing(Object
o){
        System.out.println("O
bject");
    }

    private Confusing(double
[] dArray){
        System.out.println("d
ouble array");
    }

    public static void main(S
tring[] args){
       new Confusing(null);
    }
}
```

double array

What is the **output** of the Confusing class?

What does the following program print?

```
class Dog {
    public static void bark()
{
        System.out.print("woo
f ");
    }
}

class BullDog extends Dog{
    public static void bark()
{}
}

public class Bark {
    public static void main(S
tring args[]) {
        Dog labrador = new Do
g();
        Dog frenchBD = new Bu
llDog();
        labrador.bark();
        frenchBD.bark();
    }
}
```

What is the most probable cause of NullPointerException?

- Exhausting all available memory
- Referencing a file that cannot be located
- Trying an illegal type cast
- Using an object that has not been instantiated.

Consider the code that uses **inheritance** below and **select** the most correct statement.

```
public class Shape{
//...
}

public class Rectangle extend
s Shape{
//...
}

public class Square extends R
ectangle{
//...
}
```

- A Square is a Rectangle but not a Shape.
- A Rectangle is a Square and also a Shape.
- A Rectangle is a Shape but not a Square.
- Such inheritance is not allowed in Java.

```
public class Car{
    private String make;
    private int year;

    public Car(){
        make = "FIAT";
        year =  2021;
    }

    public Car(String make, i
nt year){
        this.make = make;
        this.year =  year;
    }

    @Override
    public String toString(){
        return (make+ " " + y
ear);
    }

    public static void main(S
tring args[]){
        Car aCar = new Car("K
ia", 2020);
        System.out.println(aC
ar);
    }
}
```

- Fiat 2021
- Compilation Error
- Fiat 2020
- Kia 2020

The following piece of code is stored in a file named `MyClass.java`. What is the output of this program if it is run by typing the following command?

`javac Car.java; java Car`

```
class MyClass{
    public static void main(S
tring[] args){
        boolean arr[] = new b
oolean[4];
        arr[0] =  true;
        arr[1] = arr.length >
4 ? true : false;
        System.out.printf("%b
%b %b", arr[0],arr[1],arr
[3]);
    }
}
```

- true false false
- true false true
- false true true
- true true false

Given the following piece of code:

```
public interface MyInterface{
    public MyInterface(){
        System.out.println("T
his is a constructor");
    }
    void myMethod();
}
```

What will be the output of it?

Which **line** will cause an error in the code snippet given below?

```
1. interface MyInterface{
2.     final int k = 8;
3.     private int m;
4.     public void aMethod();
5.     String fun(char s);
6. }
```

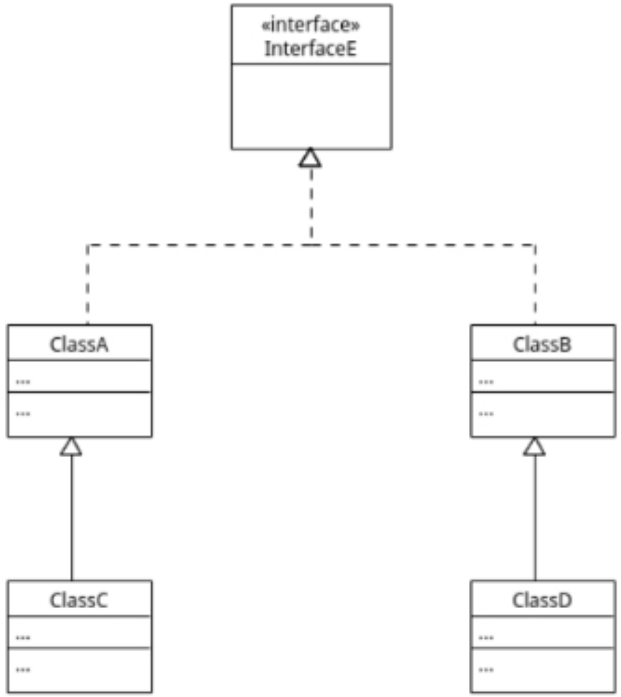
```
interface InterfaceA{
    void go();
}

class ClassB {
    public void go(){
        System.out.println("G
O!");
    }
}

class ClassC extends ClassB i
mplements InterfaceA{}

class Main{
    public static void main(S
tring[] args){
        InterfaceA a = new Cl
assC();
        a.go();
    }
}
```

What would be the **output**?

Given the UML diagram below and the code lines provided, select **ALL** expressions that evaluate as '**true**'.

```
ClassA objectA = new ClassA
();
ClassA objectA2 = objectA;
ClassA objectA3 = new ClassA
();
ClassC objectC = new ClassC
();
ClassD objectD = new ClassD
();
```

- [x] objectC instanceof InterfaceE
- [x] objectC instanceof ClassA
- [x] objectA2 == objectA
- [ ] objectA == objectA3



What will be the **output** of the following code snippet?

```
List<Object> object1 = new Ar
rayList<Long>();
object1.add("I don't fit i
n");
```

What will be the output of the following piece of code when it is called from a main method? compile error

```
public class MyException throws Exception{
    public MyException(){
        super("I am an exception");
    }
}
```

extends

```
int j = -1;
if((j >0) || (1/(j+1) > 10)){
    System.out.println("True branch. j = "+j);
}else{
    System.out.println("False branch. j = "+j);
```

run time error

What would be the output?

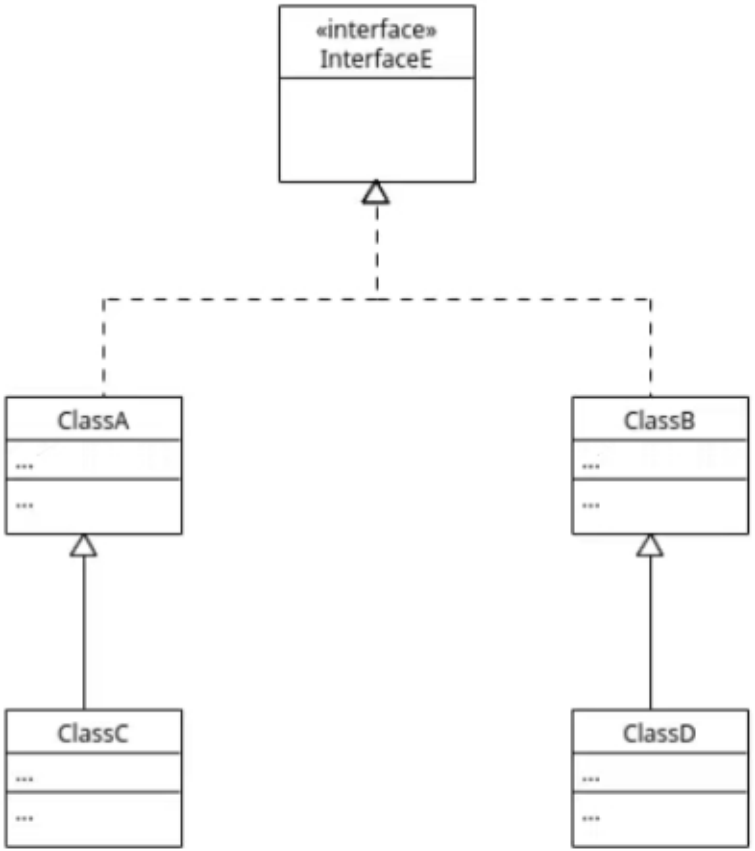
```
*
***
*****
*******
*********
```

```
1. for(int i=0;i<5; i++){
2.     for(<INSERT CODE HERE>){
3.         System.out.print("*");
4.     }
5.     System.out.println();
6. }
```

```
public static void main(String[] args){
    Scanner inputStream = null;

    try{
        inputStream = new Scanner(new FileInputStream(args[1]));
    }catch(FileNotFoundException ffe){
        System.out.println("File not found");
    }

    while(inputStream.hasNextLine()){
        String line = inputStream.nextLine();
        int number = Integer.parseInt(line);
        System.out.println(number);
    }

    inputStream.close();
}
```

- [x] ArrayIndexOutOfBoundsException
- [ ] FileNotFoundException
- [x] NullPointerException
- [ ] ClassCastException
- [x] NumberFormatException

Given the UML diagram below, choose **ALL** pieces of code that will introduce **compilation errors**.




```
ArrayList<ClassC> aList = new
ArrayList<ClassC>();

aList.add(new ClassA());

aList.add(new ClassC());
```

```
ArrayList<InterfaceE> aList = new
ArrayList<InterfaceE>();

aList.add(new ClassA());

aList.add(new ClassA());

aList.add(new ClassB());

aList.add(new ClassB());
```

```
ArrayList<ClassA> aList = new
ArrayList<ClassA>();

aList.add(new ClassA());

aList.add(new ClassB());

aList.add(new ClassC());

aList.add(new ClassD());
```

```
ArrayList<InterfaceE> aList = new
ArrayList<InterfaceE>();

aList.add(new ClassA());

aList.add(new ClassB());

aList.add(new ClassC());

aList.add(new ClassD())
```

Given the following Java program, which one of the **following** choices given below will you put at **line number 17** to make the program compile?.

```
1. class Main {
2.     public static void mai
n(String[] args){
3.         Son sonObj = new So
n(3, "Noob");
4.     }
5. }
6.
7. class Parent {
8.     protected int x;
9.     Parent(int x) {
10.         this.x = x;
11.     }
12. }
13.
14. class Son extends Parent
{
15.     private String s;
16.     Son(int x, String s)
{
17.         <INSERT CODE HERE
>
18.         this.s = s;
19.     }
20. }
```

An iterator method is a classical way to iterate through the ArrayList elements

and it returns the elements in an **unordered** way.

True False

A java interface is of type Class?

True False

What is the output of this statement if `a = 25` and `b = 8`?

```
System.out.println(b/2 – a%7.0 +2)
```

The `writeObject()` method of the class `ObjectOutputStream` is used to write content on the text file.

True False

What will be the output for this code snippet?

```
int[] arr = {1,1,0,0,0};
for(int i= 2; i< arr.length -1; i++)
   arr[i] = arr[i-2]+arr[i-1];
for(int i =0 ; i< arr.length; i++)
   System.out.print(arr[i] + “,”);
```

Given the code snippet given below that prints a triangle like this:

```
  *
 ***
*****
*******
```

```
1. int rows = 7;
2. for (int i = 1; i <= rows / 2 + 1; i++) {
3.     for (int j = 1; j <= rows / 2 + 1 - i; j++)
4.         System.out.print(" ");
5.     for (<INSERT CODE HERE>)
           System.out.print("*");
       System.out.println();
   }
```

✗ int k = 1; k <= 2 * i - 1; k--

✗ int k = 1; k <= 2 / i - 1; k--

✓ int k = 1; k <= 2 * i + 1; k++

✗ int k = 1; k <= 2 * i - 1; k++

1, 2, 3, 4

1 3 5 7

What will be the output of the following piece of code.

```
class Parent {
    void display() {
        System.out.println("Parent class");
    }
}

class Child extends Parent {
    void display() {
        System.out.println("Child class");
    }
}

public class Main {
    public static void main(String[] args) {
        Parent obj = new Parent();
        ((Child) obj).display();
    }
}
```

Runtime Error

Child Class

Parent Class

Compilation Error ✓

What will be the output of the following piece of code.

```
class Parent {
    private int x = 10;
}
class Child extends Parent {
    public void display() {
        System.out.println(x);
    }
}
public class Main {
    public static void main(String[] args) {
        Child obj = new Child();
        obj.display();
```

The following declaration for enumerations in Java is correct? `enum Colours = {RED, GREEN, BLUE}`

Given the following method:

```
 public static <T1, T2> boolean isSameClass(T1 a, T2
b) {
        return (a.getClass() == b.getClass());
}
```

The main method in the class where the above code snippet is given, calls the isSameClass method this way

```
System.out.println(isSameClass("Hello", 3));
```

In not more than 2 lines explain what will be output when the **System.out.println** is called? False

Given a Class Pair with the Class definition as:

```
public class Pair<T>
```

The following code snippet is correct and will result in no error.

```
Pair[] a = new Pair[10];
```

Pair<String> a = new Pair[10]

Given the code snippet below:

```
public static boolean calculate(){
   try {
       int x = 5 / 0; // exception is thrown here
       return true; // This line is never reached
   }catch (Exception e) {
       return false;
   } finally {
       return true;
   }
}
public static void main(String[] args) {
    System.out.println(calculate());
```

=>true