Q9

Due Feb 20 at 3:15pm **Points** 100 **Questions** 21
Available Feb 20 at 2pm - Feb 20 at 3:15pm about 1 hour
Time Limit 75 Minutes **Allowed Attempts** 2

Take the Quiz Again

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	10 minutes	30 out of 100 *

* Some questions not yet graded

ⓘ Answers will be shown after your last attempt

Score for this attempt: **30** out of 100 *
Submitted Feb 20 at 2:59pm
This attempt took 10 minutes.

Question 1 — 1 / 1 pts

In Java, exceptions are

- (•) objects
- ( ) classes
- ( ) statements
- ( ) compile-time errors

Question 2

1 / 1 pts

The has methods of the Scanner class let you

- check if the user has entered data at the console
- check if the data entered at the console can be converted to a specific data type
- retrieve and discard data that isn't required by the application
- all of the above
- a and b only

Question 3

1 / 1 pts

To determine the cause of an unhandled exception, you can

- use the name of the exception class that's displayed
- use the error message that's displayed
- use the information in the stack trace
- all of the above

Question 4

1 / 1 pts

To handle an exception using the try statement, you must

- code a try block around the statement that may throw the exceptions
- code a finally block that contains the statements that will be executed at the end of the try statement
- code a catch block that contains the statements that you want to be executed when the exception occurs
- all of the above
- (selected) a and c only

Question 5

1 / 1 pts

What is the main reason for using a generic data validation method?

- It runs faster than validation code in the main method.
- (selected) It saves you from writing variations of the same code again and again to check multiple data entries.
- It prevents NumberFormatExceptions from being thrown.
- None of the above.

Question 6

1 / 1 pts

When a statement within a try block causes an exception, the remaining statements in the try block

- are executed after the statements in the catch block
- are executed before the statements in the catch block
- (•) aren't executed

Question 7

1 / 1 pts

When is the code within a catch block executed?

- When the code in the try block doesn't compile
- (•) When the exception specified in the catch block is thrown in the try block
- When the try block finishes executing
- When a runtime error occurs

Question 8

1 / 1 pts

Which class in the following list of classes are all exceptions

subclasses of?

- (•) Exception
- ( ) Throwable
- ( ) Error
- ( ) RuntimeException

Question 9

1 / 1 pts

Which of the following classes define exceptions that can occur in a Java application?

- ( ) ArithmeticException
- ( ) NumberFormatException
- ( ) NullPointerException
- (•) all of the above
- ( ) none of the above

Question 10

1 / 1 pts

You should validate user entries rather than catch and handle exceptions caused by invalid entries whenever possible because

- (•) your code will run faster
- ( ) data validation code should only be used for situations that are truly exceptional
- ( ) you can more accurately determine the cause of an invalid entry
- ( ) all of the above

Question 11

2 / 2 pts

```
import java.util.Scanner;
import java.text.NumberFormat;

public class WeightConverter
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        String prompt = "Enter weight in lbs: ";
        boolean isValid = false;
        double weightInPounds = 0.0;
        while (isValid == false)
        {
            weightInPounds = getDouble(sc, prompt);
            if (weightInPounds > 0)
                isValid = true;
            else
                System.out.println("Weight must be greater than
0.");
        }
        double weightInKilos = weightInPounds / 2.2;
        NumberFormat nf = NumberFormat.getNumberInstance();
```

```
        nf.setMaximumFractionDigits(2);
        String message = weightInPounds + " lbs\nequals\n"
            + nf.format(weightInKilos) + " kgs\n";
        System.out.print(message);
    }

    public static double getDouble(Scanner sc, String prompt)
    {
        double d = 0.0;
        boolean isValid = false;
        while (isValid == false)
        {
            System.out.print(prompt);
            if (sc.hasNextDouble())
            {
                d = sc.nextDouble();
                isValid = true;
            }
            else
            {
                System.out.println
                    ("Error! Invalid decimal value. Try again.");
            }
            sc.nextLine();
        }
        return d;
    }
}
```

What type of data validation does this program do?

- range checking only
- valid data type checking only

- (•) both range and valid data type checking
- ( ) it doesn't do any data validation

Question 12

2 / 2 pts

```
import java.util.Scanner;
import java.text.NumberFormat;

public class WeightConverter
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        String prompt = "Enter weight in lbs: ";
        boolean isValid = false;
        double weightInPounds = 0.0;
        while (isValid == false)
        {
            weightInPounds = getDouble(sc, prompt);
            if (weightInPounds > 0)
                isValid = true;
            else
                System.out.println("Weight must be greater than
0.");
        }
        double weightInKilos = weightInPounds / 2.2;
        NumberFormat nf = NumberFormat.getNumberInstance();
        nf.setMaximumFractionDigits(2);
        String message = weightInPounds + " lbs\nequals\n"
            + nf.format(weightInKilos) + " kgs\n";
        System.out.print(message);
    }
```

```
    public static double getDouble(Scanner sc, String prompt)
    {
        double d = 0.0;
        boolean isValid = false;
        while (isValid == false)
        {
            System.out.print(prompt);
            if (sc.hasNextDouble())
            {
                d = sc.nextDouble();
                isValid = true;
            }
            else
            {
                System.out.println
                    ("Error! Invalid decimal value. Try again.");
            }
            sc.nextLine();
        }
        return d;
    }
}
```

If the user enters -1 at the first console prompt, what does the code do?

- figures the weight in kilograms
- catches an exception
- displays an error message from the getDouble method
- displays an error message from the main method

Question 13

2 / 2 pts

```
import java.util.Scanner;
import java.text.NumberFormat;

public class WeightConverter
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        String prompt = "Enter weight in lbs: ";
        boolean isValid = false;
        double weightInPounds = 0.0;
        while (isValid == false)
        {
            weightInPounds = getDouble(sc, prompt);
            if (weightInPounds > 0)
                isValid = true;
            else
                System.out.println("Weight must be greater than
0.");
        }
        double weightInKilos = weightInPounds / 2.2;
        NumberFormat nf = NumberFormat.getNumberInstance();
        nf.setMaximumFractionDigits(2);
        String message = weightInPounds + " lbs\nequals\n"
            + nf.format(weightInKilos) + " kgs\n";
        System.out.print(message);
    }

    public static double getDouble(Scanner sc, String prompt)
    {
        double d = 0.0;
        boolean isValid = false;
        while (isValid == false)
```

```
        {
            System.out.print(prompt);
            if (sc.hasNextDouble())
            {
                d = sc.nextDouble();
                isValid = true;
            }
            else
            {
                System.out.println
                    ("Error! Invalid decimal value. Try again.");
            }
            sc.nextLine();
        }
        return d;
    }
}
```

If the user enters “two hundred” at the console prompt, what does the code do?

- figures the weight in kilograms
- throws an InputMismatchException
- displays an error message from the getDouble method
- displays an error message from the main method

Question 14

2 / 2 pts

```
import java.util.Scanner;
import java.text.NumberFormat;

public class WeightConverter
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        String prompt = "Enter weight in lbs: ";
        boolean isValid = false;
        double weightInPounds = 0.0;
        while (isValid == false)
        {
            weightInPounds = getDouble(sc, prompt);
            if (weightInPounds > 0)
                isValid = true;
            else
                System.out.println("Weight must be greater than
0.");
        }
        double weightInKilos = weightInPounds / 2.2;
        NumberFormat nf = NumberFormat.getNumberInstance();
        nf.setMaximumFractionDigits(2);
        String message = weightInPounds + " lbs\nequals\n"
            + nf.format(weightInKilos) + " kgs\n";
        System.out.print(message);
    }

    public static double getDouble(Scanner sc, String prompt)
    {
        double d = 0.0;
        boolean isValid = false;
        while (isValid == false)
        {
            System.out.print(prompt);
```

```
            if (sc.hasNextDouble())
            {
                d = sc.nextDouble();
                isValid = true;
            }
            else
            {
                System.out.println
                    ("Error! Invalid decimal value. Try again.");
            }
            sc.nextLine();
        }
        return d;
    }
}
```

If the user enters 118 at the console prompt, what is the third line of the resulting console display?

- 53 kgs
- 53.6363 kgs
- 53.64 kgs
- 54 kgs

Question 15

2 / 2 pts

Consider the code that follows. What does it do?

```
String value = "2";
```

```
boolean tryAgain = true;
while (tryAgain == true)
{
    try
    {
        int num = Integer.parseInt(value);
        tryAgain = false;
    }
    System.out.println("Valid integer");
    catch(NumberFormatException nfe)
    {
        System.out.println("Invalid integer");
        System.out.print("Enter an integer");
        value = sc.next
    }
}
```

- It prints “Valid integer” to the console.
- It prints “Invalid integer” to the console.
- The code doesn’t compile.
- The code compiles but causes a runtime error.

Question 16

2 / 2 pts

Output example:

```
Exception in thread "main" java.util.InputMismatchException
        at java.util.Scanner.throwFor(Scanner.java:818)
        at java.util.Scanner.next(Scanner.java:1420)
        at java.util.Scanner.nextDouble(Scanner.java:2324)
        at FutureValueApp.main(FutureValueApp.java:17)
```

What is this output called?

- (•) a stack trace
- ( ) a method log
- ( ) an exception handler
- ( ) an exception hierarchy

Question 17

2 / 2 pts

Output example:

```
Exception in thread "main" java.util.InputMismatchException
        at java.util.Scanner.throwFor(Scanner.java:818)
        at java.util.Scanner.next(Scanner.java:1420)
        at java.util.Scanner.nextDouble(Scanner.java:2324)
        at FutureValueApp.main(FutureValueApp.java:17)
```

What caused the exception to occur?

- (•) The user didn't enter the type of data the program was expecting.
- ( ) The program couldn't format the double value that the user entered.
- ( ) You can't tell from the information given.

Question 18

2 / 2 pts

Output example:

```
Exception in thread "main" java.util.InputMismatchException
        at java.util.Scanner.throwFor(Scanner.java:818)
        at java.util.Scanner.next(Scanner.java:1420)
        at java.util.Scanner.nextDouble(Scanner.java:2324)
        at FutureValueApp.main(FutureValueApp.java:17)
```

Which statement would you look at to find the source of the problem?

- line 818 in the Scanner class
- line 1420 in the Scanner class
- line 2324 in the Scanner class
- line 17 in the FutureValueApp class

Question 19

2 / 2 pts

Output example:

```
Exception in thread "main" java.util.InputMismatchException
        at java.util.Scanner.throwFor(Scanner.java:818)
        at java.util.Scanner.next(Scanner.java:1420)
        at java.util.Scanner.nextDouble(Scanner.java:2324)
        at FutureValueApp.main(FutureValueApp.java:17)
```

What is the order of method calls?

- java.util.Scanner.throwFor calls java.util.Scanner.next calls java.util.Scanner.nextDouble calls FutureValueApp.main
- FutureValueApp.main calls java.util.Scanner.nextDouble calls java.util.Scanner.next calls java.util.Scanner.throwFor
- you can't tell from the information given

Question 20

2 / 2 pts

What happens in the method that follows when s is "two"?

```
public double parseInterval(String s)
{
    double interval = 0.0;
    try
    {
        interval = Double.parseDouble(s);
    }
    catch(NumberFormatException e)
    {
    }
    return interval;
}
```

- 2.0 is returned
-

a compile-time error occurs since the catch block isn't properly coded

- ○ no value is returned since the catch block doesn't return a value
- ◉ 0.0 is returned

Question 21

Not yet graded / 70 pts

9. Java: Multiple Selection Lists (GUI)

Your Answer:

Quiz Score: **30** out of 100