Java Assessment

1. Which Java class is the parent class of all Exceptions?
Ans. java.lang.Exception class

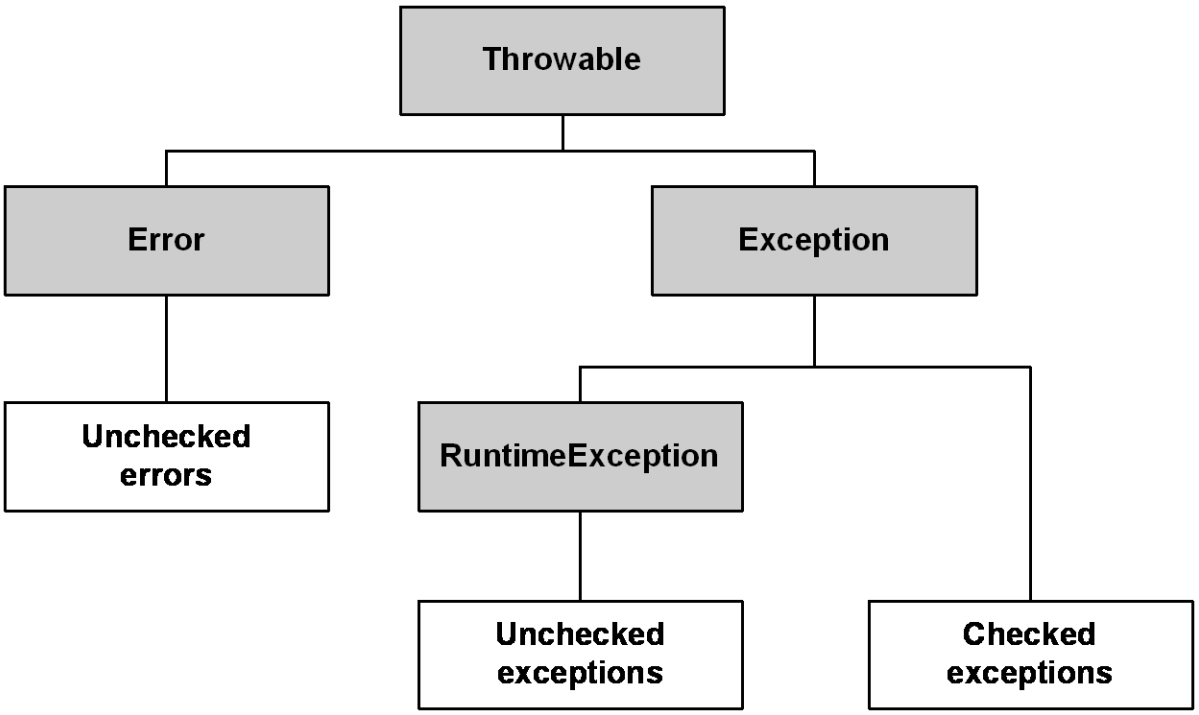
2. What is the difference between Exceptions and Errors?
Ans.

Sr. No.	Key	Error	Exception
1	Type	Classified as an unchecked type	Classified as checked and unchecked
2	Package	It belongs to java.lang.error	It belongs to java.lang.Exception
3	Recoverable/ Irrecoverable	It is irrecoverable	It is recoverable
4	Time	It can't be occur at compile time	It can occur at run time compile time both
5	Example	OutOfMemoryError ,IOError	NullPointerException , SqlException

3. What is the purpose of Exceptions? Give an example of what they're used for.?
Ans. By using try and catch to handle exceptions. Examples are Trying to divide by 0 and File not found.

4. Draw the basic exception-class hierarchy, with Throwable at the top. Include at least two subclasses of Error, Exception, and RuntimeException.?

Ans.



5. In the following statements, suppose S1 throws an Exception, so S2 is executed. State what happens in two cases: (1) S2 throws an exception, (2) S2 does not throw an exception.

```
try { S1 }
catch (Exception e) { S2 }
S3
```

Ans. If S1 throws an exception, S2 will be executed. If S2 throws an exception, the process will be stopped and S3 will not be executed. If S2 does not throw an exception, S2 will be executed and S3 will also be executed.

6. Consider class C given below. Function Integer.parseInt throws a NumberFormatException if its argument does not contain an integer. Below class C, rewrite the class so that if Integer.parseInt throws an exception, the number 1 is used. Note that Integer.parseInt is called in two places so you may need two try-statements.

Don't be concerned with how one reads from the keyboard, pausing until something is typed.

```
public class C {
        /** Print the sum of two integers read from the keyboard */
        public static void main(String[] args) {
        System.out.println("Enter a number: ");
      String s;
        Read a line from the keyboard and store it in s;
        int a= Integer.parseInt(s);
```

```
        System.out.println("Enter another number: ");
        Read a line from the keyboard and store it in s;
        int b= Integer.parseInt(s);
        System.out.println("Product: " + a*b);
        }

}
```

Ans.

```
public class Main {

   /** Print the sum of two integers read from the keyboard */

   public static void main(String[] args) {

        System.out.println("Enter a number: ");

        String s = "mk";

        int a= 1;

        try {a= Integer.parseInt(s);}

        catch (NumberFormatException nfe) {}

        System.out.println("Enter another number: ");

        int b= 1;

        try {b= Integer.parseInt(s);}

        catch (NumberFormatException nfe) {}

        System.out.println("Product: " + a*b);

   }

}
```