

## Practice Problems: Chapter 12 - Exception Handling and Text IO

1. Why do we need exception handling?

2. When is a system error encountered and what can we do about it?

3. Exceptions can be both checked or unchecked? Yes/no?

4. What are the ways in which we can handle an exception created by our code?

5. Which statements will be executed for the following pseudo-program when the main function1 is called?

```
main function1 {  
    try{  
        statement 1;  
        call function2;  
        statement2;  
    }  
    catch(Exception1 ex1){  
        statement3;  
    }  
    statement4;  
}
```

```
function2  
throws Exception1{  
    try{  
        statement5;  
        call function3;  
        statement6;  
    }  
    catch(Exception2 ex2){  
        statement7;  
    }  
    statement8;  
}
```

```
function3  
throws Exception1, Exception2{  
    try{  
        statement9;  
        throw new Exception3;  
        statement10;  
    }  
    catch(Exception3 ex3){  
        statement11;  
    }  
    statement12;  
}
```

6. Which statements will be executed for the following pseudo-program when the main function1 is called?

```
main function1 {  
    try{  
        statement 1;  
        call function2;  
        statement2;  
    }  
    catch(Exception1 ex1){  
        statement3;  
    }  
    statement4;  
}
```

```
function2  
throws Exception1{  
    try{  
        statement5;  
        call function3;  
        statement6;  
    }  
    catch(Exception2 ex2){  
        statement7;  
    }  
    statement8;  
}
```

```
function3  
throws Exception1, Exception2{  
    try{  
        statement9;  
        throw new Exception2;  
        statement10;  
    }  
    catch(Exception3 ex3){  
        statement11;  
    }  
    statement12;  
}
```

7. Which statements will be executed for the following pseudo-program when the main function1 is called?

```
main function1 {  
    try{  
        statement1;  
        call function2;  
        statement2;  
    }  
    catch(Exception1 ex1){  
        statement3;  
    }  
    statement4;  
}
```

```
function2 throws Exception1{  
    try{  
        statement5;  
        call function3;  
        statement6;  
    }  
    catch(Exception2 ex2){  
        statement7;  
    }  
    finally{  
        statement8;  
    }  
}
```

```
function3  
throws Exception1, Exception2{  
    try{  
        statement9;  
        throw new Exception2;  
        statement10;  
    }  
    catch(Exception3 ex3){  
        statement11;  
    }  
    finally{  
        statement12;  
    }  
}
```

8. What might be motivation for a programmer to define custom exception classes?