More Exception Handling

Assignment-1

```java
package ExampleProgram;

import java.util.Scanner;
import java.util.InputMismatchException;

public class IntegerInputExample {

public static void main(String[] args) {

 // Create a scanner object to read user input
Scanner scanner = new Scanner(System.in);

int userInput = 0;
boolean validInput = false;

// Loop until the user enters a valid integer
while (!validInput)
{

System.out.print("Please enter an integer: ");
try
{
// Try to read the integer input
userInput = scanner.nextInt();
validInput = true; // If no exception occurs, the input is valid
}
catch (InputMismatchException e)
{
// Handle the case where the input is not an integer
System.out.println("Error: That's not a valid integer. Please try again.");
scanner.nextLine(); // Consume the invalid input to clear the buffer
}
}

// Display the valid integer entered by the user
System.out.println("You entered the integer: " + userInput);

// Close the scanner
scanner.close();

}
```

```
}
```
Output:

```
Please enter an integer: cdr
Error: That's not a valid integer. Please try again.
Please enter an integer: 23
You entered the integer: 23
```

Assignment-2

```java
package ExampleProgram;

import java.util.Scanner;

public class IntegerConversion {

public static void main(String[] args)
{
 // Create a scanner object to read user input
Scanner scanner = new Scanner(System.in);

// Prompt the user to enter a string that can be converted to an integer
System.out.print("Enter a number: ");
String userInput = scanner.nextLine();

try
{
// Try to convert the string input to an integer using Integer.parseInt()
if (userInput == null)
{
throw new NullPointerException("Input is null.");
}
int number = Integer.parseInt(userInput);
System.out.println("The integer value is: " + number);

}
catch (NumberFormatException e)
{
// Handle the case where the input is not a valid integer
System.out.println("Error: Invalid input. Please enter a valid integer.");

}
catch (NullPointerException e)
{
```

```java
            // Handle the case where the input is null
            System.out.println("Error: Input is null. Please provide a valid input.");

        }
        finally
        {
            // Close the scanner
            scanner.close();
        }

    }

}
```

Output:

```
Enter a number: 456
The integer value is: 456

Enter a number: aed
Error: Invalid input. Please enter a valid integer.

Enter a number: 1d3
Error: Invalid input. Please enter a valid integer.
```