CMPT 473 ASSIGNMENT 1

Edwin Gao <yga22> · Geoff Groos <ggroos>

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Specification of the Program Under Test

The program under test, Xml to Csv Conversion Tool has a fairly simple input/output requirement, owing to its narrowly focused nature.

Input

This program takes a standard, validated XML file as its sole input.

Supporting documentation is as follows.

XML

The XML standard is defined by the W3C Consortium.

A valid XML file is required for input into this program.

Any XML file(s) found to be in violation of this standard is rejected by this program during the file input stage.

Output

This program outputs a CSV file as its sole output.

Supporting documentation is as follows.

CSV

CSV lacks a formal standard; however the output of this program is RFC 4180 compliant.

Category-Partition Method

In this section the chosen component will be analyzed for its input domain and constraints.

Component Specification

The following is the specification of the function under test.

Function	ConvertTables
Syntax	private static void ConvertTables(<parameter1>, <parameter2>)
Details	The ConvertTables function encapsulates all of the tasks involved in the conversion a XML file to a CSV file. Upon being called with a path to the input file (specified with parameter1) the ConvertTables function will attempt to open, validate and parse the XML file at the path specified. After XML processing is complete, the internal data structure is then written to a CSV file located at the path specified in parameter2. Indirectly, this function has multiple parameters; any standard-compliant XML file and the file path to the XML file being two examples.

Category Partition

The function 'OpenXmlFile' has the following characteristics.

Parameters
File Name
File exists
File does not exist
Not given

Environmental Variables	
Execution	XML Validity
Window (WPF)	Valid
Command Line	Invalid
XML Content	Tables
List formatted	None
Nested documents	One
Escape-coded elements	More than one
Non-printable characters	
Empty	Duplicate Columns
Corrupt	None
	Exists

Constraints

Parameters

File Name

File exists	-
File does not exist	[Error]
Not given	[Error]

Environment

Execution

Window (WPF)	-
Command Line	-

XML Content

List formatted	[if NonEmpty]
Nested documents	[if NonEmpty]
Escape-coded elements	[if NonEmpty]
Non-printable characters	[error]
Empty	[error]
Corrupt	[error]

XML Validity

Valid	[if NonEmpty]
Invalid	[error]

Tables

None	[if Empty]
One	[if NonEmpty]
More than one	[if NonEmpty] [property Match]

Duplicate Columns

None	[if NonEmpty]
Exists	[if NonEmpty] [property Match]