



CMPT 473 ASSIGNMENT 1

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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	OpenXmlFile
Syntax	private void OpenXmlFile(<parameter>)
Details	<p>The OpenXmlFile function directly provides the path to the XML file to be opened, validated and parsed. This function specifies a single Boolean flag to be set for its operation.</p> <p>Upon being called, the OpenXmlFile function will attempt to open, validate and parse the XML file at the path specified.</p> <p>The immediate parameter of this function is the single Boolean variable which serves to toggle a hidden aspect of the program that deals with duplicate column names.</p> <p>Indirectly, this function has multiple parameters; any standard-compliant XML file, and the file path to the XML file. The input file is validated against a user-specified XML Schema, or the XML standard if not specified.</p>

Category Partition

The function 'OpenXmlFile' has the following characteristics.

Parameters	
Boolean	File Name
True	File exists
False	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

Boolean

True	[if NonEmpty and if Match]
False	[if NonEmpty]

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]

