# Problem 3 – Survey Parser

Write a JavaScript program that **parses** a given **document** that may contain the results of a **rating survey** and outputs a **summary** of the votes. You will receive a **string** that contains XML-formatted data. From this data, you must extract a **valid label** and **average rating** (sum of ratings, divided by their count). Input, containing valid survey data will follow these rules:

* The document may contain **any symbol** **before and after** the survey data
* The survey data **always** begins with <svg> and ends with </svg>:

*Any text* <svg> *Survey data* </svg> *Any text  - OK*

* Each **valid** survey will contain **exactly two** **sections** beginning with <cat> and ending with </cat>
* There may be **whitespace** **between** the sections

<cat> *Survey heading and label* </cat><cat> *Ratings* </cat> - ok

* The contents of the first cat section must begin with <text> and end with </text>; it may contain **any text**, but needs to have a **valid label**, inside brackets []

<text> *Survey heading* [ *Survey Label* ]</text> - ok

* The second cat section contains all of the **ratings** with each vote beginning with <g> and ending with </g>
* A **valid rating** contains a **value** and **count**, with the **value** surrounded by <val> and </val> and the **count** right **after the value**
* There may be any number of **valid** and **invalid ratings** inside the second cat; you should **only** **process** the valid ones, and **ignore** the invalid ratings

<g><val> *Rating value* </val> *Vote count* </g>

* + **Valid** rating: <g><val>1</val>0</g>
  + **Invalid** rating (**ignore** and continue): <g><val>Seafood</val>1</g>
* The **value** must be a number between **1** and **10**
* The **count** must be a number **0** or larger

If the document **does not** contain survey data (no opening and closing svg tags), print on the console "**No survey found**". If there is survey data, but the rest of the rules aren’t followed, print on the console "**Invalid format**".

At the **end** of the program, print on the **console** the **label** of the survey and the **average rating**, **rounded** to two decimal places.

### Input

You will receive a single **string**, containing a document to be parsed.

### Output

Depending on outcome, print on the **console a single line**:

* **No survey found**
* **Invalid format**
* **{label}: {average rating}**

### Constraints

* There will never be more than one valid survey
* Rating **value** will be in range **[1…10]**
* Rating **count** will be in range **[1…1 000 000]**

### Examples

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| **Input** |
| <p>Some random text</p><svg><cat><text>How do you rate our food? [Food - General]</text></cat><cat><g><val>1</val>0</g><g><val>2</val>1</g><g><val>3</val>3</g><g><val>4</val>10</g><g><val>5</val>7</g></cat></svg><p>Some more random text</p> |
| **Output** |
| Food - General: 4.1 |
| **Explanation** |
| The survey data is surrounded by <svg> and </svg>, the remaing data is discarded. The first cat contains our label, surrounded by brackets: Food – General.  The second cat contains five ratings, all surrounded with <g> and </g>, and when parsed we get the following:  0 votes with value 1 = 0  1 votes with value 2 = 2  3 votes with value 3 = 9  10 votes with value 4 = 40  7 votes with value 5 = 35  The sum of all ratings is 86, divided by their count 21 gives us the average rating **4.095…**, which we round to the second decimal – **4.1**. |

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| **Input** |
| <svg><cat><text>How do you rate the special menu? [Food - Special]</text></cat> <cat><g><val>1</val>5</g><g><val>5</val>13</g><g><val>10</val>22</g></cat></svg> |
| **Output** |
| Food - Special: 7.25 |

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| **Input** |
| <p>How do you suggest we improve our service?</p><p>More tacos.</p><p>It's great, don't mess with it!</p><p>I'd like to have the option for delivery</p> |
| **Output** |
| No survey found |

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| --- |
| **Input** |
| <svg><cat><text>Which is your favourite meal from our selection?</text></cat><cat><g><val>Fish</val>15</g><g><val>Prawns</val>31</g><g><val>Crab Langoon</val>12</g><g><val>Calamari</val>17</g></cat></svg> |
| **Output** |
| Invalid format |