# CSCI 548 – HomeWork 4

## Selected fields:

i.   Dimensions

This field displays the dimension of the painting in format: [ height x width cm ]. I changed this to two separate fields namely "Painting Height" and "Painting Width"

ii.   Acquisition Credit

This field displayed the name of the person and the year in which the painting was purchased. I separated both the fields into "Acquisition Credit" and "Acquisition Received"

iii.   Image URL

From the field Image URL, I extracted the name of the image and displayed in a separate column. This will allow users to know the name of the image that they are viewing on website.

## Cleaning Operations:

i.   Dimensions:

- Removed the 'cm' from dimension column.
- Separated the dimension column into two separate columns namely 'Painting Height" and "Painting Width" based on delimiter 'x'
- I had two columns with different numeric values.
- Added 'cm' to each column.
- For some paintings, the dimension was displayed by only 1 numeric value which indicates that the painting is square shaped. In such cases, the dimension got copied to the "height" column and the width column remained blank. So, I used 'if' statement to find such columns where width was null and height was not null, and copied the height to the width column.
- Functions/Conditions used – Regular expression, value.replace(), if condition, cells[""].value

ii.   Acquisition Credit:

- Filtered out the columns that are not blank and had 4 digits at the end of the value.
- Added a new column named "Acquisition Received" based on this column which is a substring of the parent column and consists the last four digits which is the year in which acquisition was received.
- Removed the year value from the original string using substring and removing the last 5 character which included the 4 digit year and a comma.
- Functions used – Regular expression, substring(), replace(), trim()

iii.   Image URL:

- Added a new column named "Image Name" based on this column which is a substring of the parent column from the last index of "/" to end.

- The new column then consisted the name of the image separated by '-' and the inventory number and .jpg in the end. Few of these columns did not have the name specified and few did not have the inventory number mentioned.
- For cases, where the name of the image was '-' separated and the inventory number and .jpg existed, I took the substring until the last index of '-' which gave the name of the image separated by '-'. I then replaced these '-' by blank space.
- In cases where the name was not specified but they had a default name "placeholderThumb", I replaced this text with a blank space thus leaving black image name cells.
- In cases where inventory number was not specified, I replaced .jpg with blank space and removed '-'.
- All the image names were then transformed to title case.
- Functions used – Regular expression, substring(), replace(), trim(), lastIndexOf(), replace(), cells[""].value

All the fields that did not have values for few painting originally were not displayed in the JSOn but they are now included in all the records with null values.

## Example Records:

i. Dimensions:

*Before Cleaning:*
{
 "Artist": "Imitator of Raphael",
 "Image URL on Website": "http://www.nationalgallery.org.uk/upload/img/raphael-portrait-young-man-NG2510-ft.jpg",
 "Artist dates": "1483 - 1520",
 "Date made": "early 16th and late 19th century",
 **"Dimensions": "26.6 x 21.6 cm",**
 "Full title": "Portrait of a Young Man",
 "Acquisition credit": "Salting Bequest, 1910",
 "Location in Gallery": "Not on display",
 "Medium and support": "Oil on wood",
 "Inventory number": "NG2510"
}

*After Cleaning:*
{
    "Date made" : "early 16th and late 19th century",
    "Full title" : "Portrait of a Young Man",
    "Inventory number" : "NG2510",
    "Location in Gallery" : "Not on display",
    "Image URL" : "http://www.nationalgallery.org.uk/upload/img/raphael-portrait-young-man-NG2510-ft.jpg",

```
      "Image Name" : "Raphael Portrait Young Man",
      "Artist" : "Imitator of Raphael",
      "Painting Height" : "26.6 cm",
      "Painting Width" : "21.6 cm",
      "Acquisition Credit" : "Salting Bequest",
      "Acquisition Received" : "1910",
      "Medium and support" : "Oil on wood",
      "Artist dates" : "1483 - 1520",
      "Inscription summary" : null,
      "Group" : null
   }
```

ii.   Acquisition Credit:

*Before Cleaning:*

```
{
   "Artist": "After Correggio",
   "Image URL on Website": "http://www.nationalgallery.org.uk/upload/img/correggio-
agony-garden-NG76-ft.jpg",
   "Artist dates": "active 1494; died 1534",
   "Date made": "probably about 1640-1750",
   "Dimensions": "38.1 x 41.9 cm",
   "Full title": "The Agony in the Garden",
   "Acquisition credit": "Bought, 1824",
   "Location in Gallery": "Room A: Paintings 1250-1600",
   "Medium and support": "Oil on poplar",
   "Inventory number": "NG76"
}
```

*After Cleaning:*

```
{
   "Date made" : "probably about 1640-1750",
   "Full title" : "The Agony in the Garden",
   "Inventory number" : "NG76",
   "Location in Gallery" : "Room A: Paintings 1250-1600",
   "Image URL" : "http://www.nationalgallery.org.uk/upload/img/correggio-agony-
garden-NG76-ft.jpg",
   "Image Name" : "Correggio Agony Garden",
   "Artist" : "After Correggio",
   "Painting Height" : "38.1 cm",
   "Painting Width" : "41.9 cm",
   "Acquisition Credit" : "Bought",
```

```
    "Acquisition Received" : "1824",
    "Medium and support" : "Oil on poplar",
    "Artist dates" : "active 1494; died 1534",
    "Inscription summary" : null,
    "Group" : null
  }
```

iii.     Image URL

*Before Cleaning:*
```
{
  "Artist": "Italian, Florentine (?)",
  "Image URL on Website": "http://www.nationalgallery.org.uk/upload/img/italian-florentine-head-dying-alexander-NG2241-ft.jpg",
  "Date made": "17th-18th century",
  "Dimensions": "79.7 cm",
  "Full title": "Head of The Dying Alexander",
  "Acquisition credit": "Presented by Henry Yates Thompson, 1894",
  "Location in Gallery": "Not on display",
  "Medium and support": "Imperial Egyptian porphyry on other",
  "Inventory number": "NG2241"
}
```

*After Cleaning:*
```
{
    "Date made" : "17th-18th century",
    "Full title" : "Head of The Dying Alexander",
    "Inventory number" : "NG2241",
    "Location in Gallery" : "Not on display",
    "Image URL" : "http://www.nationalgallery.org.uk/upload/img/italian-florentine-head-dying-alexander-NG2241-ft.jpg",
    "Image Name" : "Italian Florentine Head Dying Alexander",
    "Artist" : "Italian, Florentine (?)",
    "Painting Height" : "79.7 cm",
    "Painting Width" : "79.7 cm",
    "Acquisition Credit" : "Presented by Henry Yates Thompson",
    "Acquisition Received" : "1894",
    "Medium and support" : "Imperial Egyptian porphyry on other",
    "Artist dates" : null,
    "Inscription summary" : null,
    "Group" : null
  }
```