

Release-3 Report

(Source Code Visualisation)

TEAM 6

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Release 1:

- Visualizing the source code based on the parameters such as File count, lines of code for the repository of any programming language.
- We had visualized the name of each file appending to every node, whose radius is proportional to the loc.

Release 2:

- Visualized the code with the new metrics such as number of comment lines, blank lines including the above mentioned metrics in Release-1.
- We had visualized as mentioned above by writing the code in JavaScript.(dataConverter.js, CodeFlower.js)
- Fixed display size of the D3 visualisation to give a bigger and more comprehensive visualisation

Release 3:

- Extended the tool to support **scc**(Sloc Cloc and Code) tool as input for new metrics like complexity
- The tool now visualises the code with the metrics such as lines of code, number of comment lines, **complexity**
- We had visualized as mentioned above by writing the code in JavaScript.(dataConverter.js, CodeFlower.js, ComplexFlower.js)
- Fixed display size of the D3 visualisation to give a bigger and more comprehensive visualisation
- Added new visualization for complexity.

Future Work:

For future releases we plan to add tool-independent functionalities and allow user to input multiple metrics. The tool will allow users to visualize their metrics in desired visualizations.

Test Cases:

1. CLOC based input

Run the index.html file and input these in the respective Text Fields.

Testing JSON Generation: (This is .cloc file obtained from cloc): [Press 'Convert' button]

language,filename,blank,comment,code,"github.com/AIDanial/cloc v 1.74 T=0.27 s (83.7 files/s, 31408.5 lines/s)"

JavaScript,CodeFlower-master/javascripts/d3/d3.js,572,236,3837

JavaScript,CodeFlower-master/javascripts/d3/d3.layout.js,221,120,1555

JavaScript,CodeFlower-master/javascripts/d3/d3.geom.js,82,85,668

JavaScript,CodeFlower-master/javascripts/d3/detector.js,30,25,383

JSON,CodeFlower-master/data.json,0,0,326

HTML,CodeFlower-master/index.html,9,1,157

JavaScript,CodeFlower-master/javascripts/CodeFlower.js,27,9,113

JavaScript,CodeFlower-master/javascripts/dataConverter.js,10,28,75

CSS,CodeFlower-master/stylesheets/style.css,3,0,17

Markdown,CodeFlower-master/README.md,4,0,9

JSON,CodeFlower-master/data/faker.json,0,0,1

JSON,CodeFlower-master/data/zf2.json,0,0,1

CSS,CodeFlower-master/stylesheets/bootstrap.min.css,0,8,1

JSON,CodeFlower-master/data/rails.json,0,0,1

JSON,CodeFlower-master/data/propel2.json,0,0,1

JSON,CodeFlower-master/data/lichess.json,0,0,1

JSON,CodeFlower-master/data/uptime.json,0,0,1

JSON,CodeFlower-master/data/jquery.json,0,0,1

JSON,CodeFlower-master/data/wordpress.json,0,0,1

JSON,CodeFlower-master/data/twig.json,0,0,1

JSON,CodeFlower-master/data/doctrine2.json,0,0,1

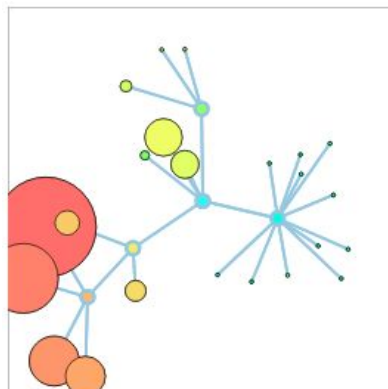
JSON,CodeFlower-master/data/symfony.json,0,0,1

CSS,CodeFlower-master/stylesheets/bootstrap-responsive.min.css,0,8,1

Expected JSON Output / Input test case for Visualisation: [Press 'Update' button]

```
{
  "name": "root",
  "children": [
    {
      "name": "javascripts",
      "children": [
        {
          "name": "d3",
          "children": [
            {
              "name": "d3.js",
              "size": 3837,
              "comment": 236,
              "language": "JavaScript"
            },
            {
              "name": "d3.layout.js",
              "size": 1555,
              "comment": 120,
              "language": "JavaScript"
            },
            {
              "name": "d3.geom.js",
              "size": 668,
              "comment": 85,
              "language": "JavaScript"
            },
            {
              "name": "detector.js",
              "size": 383,
              "comment": 25,
              "language": "JavaScript"
            },
            {
              "name": "CodeFlower.js",
              "size": 113,
              "comment": 9,
              "language": "JavaScript"
            },
            {
              "name": "dataConverter.js",
              "size": 75,
              "comment": 28,
              "language": "JavaScript"
            }
          ],
          "name": "data.json",
          "size": 326,
          "comment": 0,
          "language": "JSON"
        },
        {
          "name": "index.html",
          "size": 157,
          "comment": 1,
          "language": "HTML"
        },
        {
          "name": "stylesheets",
          "children": [
            {
              "name": "style.css",
              "size": 17,
              "comment": 0,
              "language": "CSS"
            },
            {
              "name": "bootstrap.min.css",
              "size": 1,
              "comment": 8,
              "language": "CSS"
            },
            {
              "name": "bootstrap-responsive.min.css",
              "size": 1,
              "comment": 8,
              "language": "CSS"
            }
          ],
          "name": "README.md",
          "size": 9,
          "comment": 0,
          "language": "Markdown"
        },
        {
          "name": "data",
          "children": [
            {
              "name": "faker.json",
              "size": 1,
              "comment": 0,
              "language": "JSON"
            },
            {
              "name": "zf2.json",
              "size": 1,
              "comment": 0,
              "language": "JSON"
            },
            {
              "name": "rails.json",
              "size": 1,
              "comment": 0,
              "language": "JSON"
            },
            {
              "name": "propel2.json",
              "size": 1,
              "comment": 0,
              "language": "JSON"
            },
            {
              "name": "lichess.json",
              "size": 1,
              "comment": 0,
              "language": "JSON"
            },
            {
              "name": "uptime.json",
              "size": 1,
              "comment": 0,
              "language": "JSON"
            },
            {
              "name": "jquery.json",
              "size": 1,
              "comment": 0,
              "language": "JSON"
            },
            {
              "name": "wordpress.json",
              "size": 1,
              "comment": 0,
              "language": "JSON"
            },
            {
              "name": "twig.json",
              "size": 1,
              "comment": 0,
              "language": "JSON"
            },
            {
              "name": "doctrine2.json",
              "size": 1,
              "comment": 0,
              "language": "JSON"
            },
            {
              "name": "symfony.json",
              "size": 1,
              "comment": 0,
              "language": "JSON"
            }
          ]
        }
      ]
    }
  ]
}
```

Expected Visualisation:



2.SCC based input

Run the index.html file and input these in the respective Text Fields.

Testing JSON Generation: (This file is obtained from scc): [Press 'Convert' button]

```
Language,Location,Filename,Lines,Code,Comments,Blanks,Complexity
License,CodeFlower/LICENSE,LICENSE,19,16,0,3,0
Markdown,CodeFlower/README.md,README.md,13,9,0,4,0
JSON,CodeFlower/data/wordpress.json,wordpress.json,1,1,0,0,0
JSON,CodeFlower/data/data.json,data.json,326,326,0,0,0
JSON,CodeFlower/data/propel2.json,propel2.json,1,1,0,0,0
JSON,CodeFlower/data/twig.json,twig.json,1,1,0,0,0
JSON,CodeFlower/data/uptime.json,uptime.json,1,1,0,0,0
JSON,CodeFlower/data/symfony.json,symfony.json,1,1,0,0,0
gitignore,CodeFlower/.gitignore,.gitignore,1,1,0,0,0
JSON,CodeFlower/package-lock.json,package-lock.json,13,13,0,0,0
HTML,CodeFlower/index.html,index.html,211,197,1,13,0
JSON,CodeFlower/data/zf2.json,zf2.json,1,1,0,0,0
JSON,CodeFlower/data/doctrine2.json,doctrine2.json,1,1,0,0,0
JSON,CodeFlower/data/faker.json,faker.json,1,1,0,0,0
JSON,CodeFlower/data/lichess.json,lichess.json,1,1,0,0,0
JSON,CodeFlower/data/jquery.json,jquery.json,1,1,0,0,0
JavaScript,CodeFlower/javascripts/dataConverter.js,dataConverter.js,149,108,28,13,19
CSS,CodeFlower/stylesheets/bootstrap.min.css,bootstrap.min.css,9,1,8,0,0
JSON,CodeFlower/package.json,package.json,22,22,0,0,0
Markdown,CodeFlower/node_modules/fs/README.md,README.md,9,7,0,2,0
CSS,CodeFlower/stylesheets/style.css,style.css,20,17,0,3,0
JSON,CodeFlower/data/rails.json,rails.json,1,1,0,0,0
CSS,CodeFlower/stylesheets/bootstrap-responsive.min.css,bootstrap-responsive.min.css,9,1,8,0,0
JavaScript,CodeFlower/javascripts/d3/d3.geom.js,d3.geom.js,835,668,85,82,149
JavaScript,CodeFlower/javascripts/ComplexFlower.js,ComplexFlower.js,150,113,9,28,9
JavaScript,CodeFlower/javascripts/d3/detector.js,detector.js,438,383,25,30,121
JavaScript,CodeFlower/javascripts/CodeFlower.js,CodeFlower.js,162,124,9,29,11
JSON,CodeFlower/node_modules/fs/package.json,package.json,46,46,0,0,0
ASP.NET,CodeFlower/.git/refs/remotes/origin/master,master,1,1,0,0,0
JavaScript,CodeFlower/javascripts/d3/d3.layout.js,d3.layout.js,1896,1555,120,221,255
ASP.NET,CodeFlower/.git/refs/heads/master,master,1,1,0,0,0
ASP.NET,CodeFlower/.git/logs/refs/remotes/origin/master,master,5,5,0,0,0
ASP.NET,CodeFlower/.git/logs/refs/heads/master,master,8,8,0,0,0
JavaScript,CodeFlower/javascripts/d3/d3.js,d3.js,4645,3837,236,572,639
```

Expected JSON Output / Input test case for Visualisation: [Press 'Update' button]

```
{
  "name": "root",
  "children": [
    {
      "name": "LICENSE",
      "complexity": 0,
      "size": 19,
      "comment": 0,
      "language": "License"
    },
    {
      "name": "README.md",
      "complexity": 0,
      "size": 13,
      "comment": 0,
      "language": "Markdown"
    },
    {
      "name": "data",
      "children": [
        {
          "name": "wordpress.json",
          "complexity": 0,
          "size": 1,
          "comment": 0,
          "language": "JSON"
        },
        {
          "name": "propel2.json",
          "complexity": 0,
          "size": 1,
          "comment": 0,
          "language": "JSON"
        },
        {
          "name": "twig.json",
          "complexity": 0,
          "size": 1,
          "comment": 0,
          "language": "JSON"
        },
        {
          "name": "uptime.json",
          "complexity": 0,
          "size": 1,
          "comment": 0,
          "language": "JSON"
        },
        {
          "name": "symfony.json",
          "complexity": 0,
          "size": 1,
          "comment": 0,
          "language": "JSON"
        },
        {
          "name": "zf2.json",
          "complexity": 0,
          "size": 1,
          "comment": 0,
          "language": "JSON"
        },
        {
          "name": "doctrine2.json",
          "complexity": 0,
          "size": 1,
          "comment": 0,
          "language": "JSON"
        },
        {
          "name": "faker.json",
          "complexity": 0,
          "size": 1,
          "comment": 0,
          "language": "JSON"
        },
        {
          "name": "lichess.json",
          "complexity": 0,
          "size": 1,
          "comment": 0,
          "language": "JSON"
        },
        {
          "name": "jquery.json",
          "complexity": 0,
          "size": 1,
          "comment": 0,
          "language": "JSON"
        },
        {
          "name": "rails.json",
          "complexity": 0,
          "size": 1,
          "comment": 0,
          "language": "JSON"
        }
      ],
      "name": "data.json",
      "complexity": 0,
      "size": 326,
      "comment": 0,
      "language": "JSON"
    },
    {
      "name": ".gitignore",
      "complexity": 0,
      "size": 1,
      "comment": 0,
      "language": "gitignore"
    },
    {
      "name": "package-lock.json",
      "complexity": 0,
      "size": 13,
      "comment": 0,
      "language": "JSON"
    },
    {
      "name": "index.html",
      "complexity": 0,
      "size": 211,
      "comment": 1,
      "language": "HTML"
    },
    {
      "name": "javascripts",
      "children": [
        {
          "name": "dataConverter.js",
          "complexity": 19,
          "size": 149,
          "comment": 28,
          "language": "JavaScript"
        },
        {
          "name": "d3",
          "children": [
            {
              "name": "d3.geom.js",
              "complexity": 149,
              "size": 835,
              "comment": 85,
              "language": "JavaScript"
            },
            {
              "name": "detector.js",
              "complexity": 121,
              "size": 438,
              "comment": 30,
              "language": "JavaScript"
            }
          ]
        }
      ]
    }
  ]
}
```

