Tools for Bad Smell Detection

Eduardo Figueiredo

http://www.dcc.ufmg.br/~figueiredo
JDeodorant

https://github.com/tsantalis/JDeodorant
JDeodorant

- **Highlights**
  - Open source project
  - Analyzes Java code
  - Eclipse plugin

- **Bad smells**
  - Feature Envy
  - Long Method
  - God Class
Refactorings are recommended for each detected bad smell instance
Screenshot: Feature Envy
inFusion

http://www.intooitus.com/products/infusion
https://marketplace.eclipse.org/content/infusion-hydrogen
inFusion

- Highlights
  - It supports C, C++, and Java
  - It includes visualization (polymetric views)

- Bad smells
  - Duplicated code
  - Feature Envy
  - God Class, etc.
Screenshot: Bad Smells

Bad smells
Stench Blossom

http://multiview.cs.pdx.edu/refactoring/smells/
Stench Blossom

- Highlights
  - Open source project
  - Analyzes Java code
  - Eclipse plugin
  - Detect smells while coding

- Bad smells
  - Feature Envy
  - Data Clumps
  - Long Method, etc.
if (Arrays.equals(router_node_id, node_id)) {

// we should never become dead ourselves as checking that stored values are close enough dead we don't return ourselves and it all

Debug.out("DHTRouter: contactDead called on router_node_id = " + router_node_id + " node_id = " + node_id);

return (local_contact);
}

try {
    try {
        try {
            this_mon.enter();

            consecutive_dead++;

            /*
             * if(# consecutive dead is > # consecutive dead in previous round)
             */
        }
    }
}
}
Screenshot: Feature Envy
PMD

https://pmd.github.io/
PMD

- Highlights
  - Open source project
  - It supports Java, JavaScript, and others
  - PMD is integrated with IDE, like Eclipse

- Bad smells
  - God Class
  - Duplicated code
  - Long Parameter List, etc.
Bibliography

- Websites of the Tools