

DUPLICATED CODE THE MOST POPULAR AND BUG PRONE WAY OF CODE REUSE

1ST CODE SMELL ACCORDING TO MR FOWLER

“INSTEAD OF AGGRESSIVELY REFACTORIZING CLONES, WE SHOULD POSSIBLY FOCUS ON TRACKING AND MANAGING CLONES DURING THE EVOLUTION OF SOFTWARE SYSTEMS,” SAHA ET AL 2010

```
def transform_options(options)
  args = []
  options.keys.each do |opt|
    if options[opt]
      args << "-#{opt}"
    elsif !options[opt]
      # ignore
    else
      val = options.delete(opt)
      args << "-#{opt.to_s} '#{e(val)}'"
    end
  end
  args
end

def wild_sh(command, &block)
  process = Child.new(command)
  [process.out, process.err]
end

def sh(command, &block)
  process =
    Child.new(
      command,
      :timeout => Git.git_timeout,
      :max => Git.git_max_size
    )
  [process.out, process.err]
rescue TimeoutExceeded, MaximumOutputExceeded
  raise GitTimeout, command
end
```

STEP 1
CTRL+C

STEP 2
CTRL+V

AUTOMATIC
WARNING

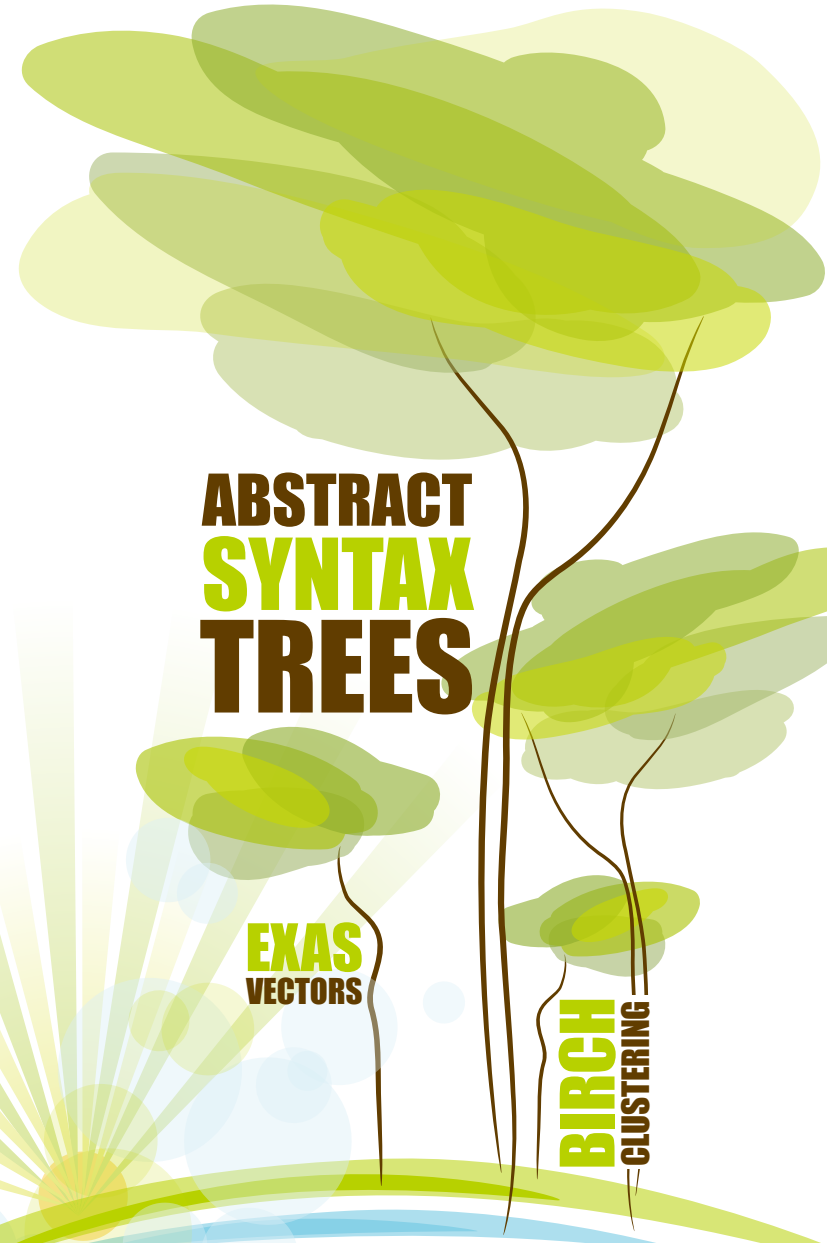
```
def transform_options(options)
  args = []
  options.keys.each do |opt|
    if opt.to_s.size == 1
      if options[opt]
        args << "-#{opt}"
      elsif !options[opt]
        # ignore
      else
        val = options.delete(opt)
        args << "-#{opt.to_s} '#{e(val)}'"
      end
    else
      if options[opt]
        args << "-#{opt.to_s.gsub(/_/ , '-')}"
      elsif !options[opt]
        # ignore
      else
        val = options.delete(opt)
        args << "-#{opt.to_s.gsub(/_/ , '-')}"#{e(val)}'"
      end
    end
  end
  args
end

def wild_sh(command, &block)
  process = Child.new(command)
  [process.out, process.err]
end
```

⚠ This code fragment is cloned

SOURCE CODE ANALYSIS USING ABSTRACT SYNTAX TREES

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