######## Language

Select

Refactor\_file\_extension as f

, count(\*) as cnt

, count(distinct s.refactor\_repo\_name + s.refactor\_commit + s.file) as cases

, count(distinct s.refactor\_commit) as commits

, avg(bug\_ratio\_after\_3\_months - bug\_ratio\_before\_3\_months) as avg\_bug\_ratio\_diff\_3\_months

, STDDEV\_POP(bug\_ratio\_after\_3\_months - bug\_ratio\_before\_3\_months) as std\_bug\_ratio\_diff\_3\_months

, avg( if (bug\_ratio\_after\_3\_months < bug\_ratio\_before\_3\_months, 1, 0)) as avg\_imporve\_bug\_ratio\_3\_months

, avg( if (bug\_ratio\_after\_3\_months < bug\_ratio\_before\_3\_months -0.1, 1, 0)) as avg\_imporve\_bug\_ratio\_3\_months\_1

, STDDEV\_POP(if (bug\_ratio\_after\_3\_months < bug\_ratio\_before\_3\_months, 1, 0)) as std\_improve\_bug\_ratio\_3\_months

, avg(bug\_ratio\_after\_6\_months - bug\_ratio\_before\_6\_months) as avg\_bug\_ratio\_diff\_6\_months

, STDDEV\_POP(bug\_ratio\_after\_6\_months - bug\_ratio\_before\_3\_months) as std\_bug\_ratio\_diff\_6\_months

, avg( if (bug\_ratio\_after\_6\_months < bug\_ratio\_before\_6\_months, 1, 0)) as avg\_imporve\_bug\_ratio\_6\_months

, STDDEV\_POP(if (bug\_ratio\_after\_6\_months < bug\_ratio\_before\_6\_months, 1, 0)) as std\_improve\_bug\_ratio\_6\_months

, avg(1.0\*(bug\_hits\_after\_6\_months - bug\_hits\_after\_3\_months)/(commits\_after\_6\_months - commits\_after\_3\_months) - bug\_ratio\_before\_3\_months) as avg\_bug\_ratio\_diff\_n3\_months

, STDDEV\_POP(1.0\*(bug\_hits\_after\_6\_months - bug\_hits\_after\_3\_months)/(commits\_after\_6\_months - commits\_after\_3\_months) - bug\_ratio\_before\_3\_months) as std\_bug\_ratio\_diff\_n3\_months

, avg( if (1.0\*(bug\_hits\_after\_6\_months - bug\_hits\_after\_3\_months)/(commits\_after\_6\_months - commits\_after\_3\_months) < bug\_ratio\_before\_3\_months, 1, 0)) as avg\_imporve\_bug\_ratio\_n3\_months

, STDDEV\_POP( if (1.0\*(bug\_hits\_after\_6\_months - bug\_hits\_after\_3\_months)/(commits\_after\_6\_months - commits\_after\_3\_months) < bug\_ratio\_before\_3\_months, 1, 0)) as std\_improve\_bug\_ratio\_n3\_months

From

[citric-trees-187317:repo\_attributes.refactor\_stats\_with\_type] as s

#### Clean conditions

where

(not s.refactor\_file\_test)

and s.major\_source\_extension

and (s.commits\_before\_3\_months > 9)

and (s.commits\_after\_3\_months > 9)

and (s.refactor\_commit\_non\_test\_files =1)

#### Scope conditions

Where

(not s.refactor\_file\_test)

and s.major\_source\_extension

and (s.commits\_before\_3\_months > 4)

and (s.commits\_after\_3\_months > 4)

and (s.refactor\_commit\_non\_test\_files < 6)

#### Scope conditions, with next

Where

(not s.refactor\_file\_test)

and s.major\_source\_extension

and (s.commits\_before\_3\_months > 4)

and (s.commits\_after\_3\_months > 4)

And (s.commits\_after\_6\_months - s.commits\_after\_3\_months) > 4

and (s.refactor\_commit\_non\_test\_files < 6)

#### Clean conditions, with next

where

(not s.refactor\_file\_test)

and s.major\_source\_extension

and (s.commits\_before\_3\_months > 9)

and (s.commits\_after\_3\_months > 9)

and (s.refactor\_commit\_non\_test\_files =1)

And (s.commits\_after\_6\_months - s.commits\_after\_3\_months) > 9

Group by f

Order by cnt desc

######## refactor\_commit\_non\_test\_files

Select

refactor\_commit\_non\_test\_files as f

, count(\*) as cnt

, count(distinct s.refactor\_repo\_name + s.refactor\_commit + s.file) as cases

, count(distinct s.refactor\_commit) as commits

, avg(bug\_ratio\_after\_3\_months - bug\_ratio\_before\_3\_months) as avg\_bug\_ratio\_diff\_3\_months

, STDDEV\_POP(bug\_ratio\_after\_3\_months - bug\_ratio\_before\_3\_months) as std\_bug\_ratio\_diff\_3\_months

, avg( if (bug\_ratio\_after\_3\_months < bug\_ratio\_before\_3\_months, 1, 0)) as avg\_imporve\_bug\_ratio\_3\_months

, avg( if (bug\_ratio\_after\_3\_months < bug\_ratio\_before\_3\_months -0.1, 1, 0)) as avg\_imporve\_bug\_ratio\_3\_months\_1

, STDDEV\_POP(if (bug\_ratio\_after\_3\_months < bug\_ratio\_before\_3\_months, 1, 0)) as std\_improve\_bug\_ratio\_3\_months

, avg(bug\_ratio\_after\_6\_months - bug\_ratio\_before\_6\_months) as avg\_bug\_ratio\_diff\_6\_months

, STDDEV\_POP(bug\_ratio\_after\_6\_months - bug\_ratio\_before\_3\_months) as std\_bug\_ratio\_diff\_6\_months

, avg( if (bug\_ratio\_after\_6\_months < bug\_ratio\_before\_6\_months, 1, 0)) as avg\_imporve\_bug\_ratio\_6\_months

, STDDEV\_POP(if (bug\_ratio\_after\_6\_months < bug\_ratio\_before\_6\_months, 1, 0)) as std\_improve\_bug\_ratio\_6\_months

, avg(1.0\*(bug\_hits\_after\_6\_months - bug\_hits\_after\_3\_months)/(commits\_after\_6\_months - commits\_after\_3\_months) - bug\_ratio\_before\_3\_months) as avg\_bug\_ratio\_diff\_n3\_months

, STDDEV\_POP(1.0\*(bug\_hits\_after\_6\_months - bug\_hits\_after\_3\_months)/(commits\_after\_6\_months - commits\_after\_3\_months) - bug\_ratio\_before\_3\_months) as std\_bug\_ratio\_diff\_n3\_months

, avg( if (1.0\*(bug\_hits\_after\_6\_months - bug\_hits\_after\_3\_months)/(commits\_after\_6\_months - commits\_after\_3\_months) < bug\_ratio\_before\_3\_months, 1, 0)) as avg\_imporve\_bug\_ratio\_n3\_months

, STDDEV\_POP( if (1.0\*(bug\_hits\_after\_6\_months - bug\_hits\_after\_3\_months)/(commits\_after\_6\_months - commits\_after\_3\_months) < bug\_ratio\_before\_3\_months, 1, 0)) as std\_improve\_bug\_ratio\_n3\_months

From

[citric-trees-187317:repo\_attributes.refactor\_stats\_with\_type] as s

#### Clean conditions

where

(not s.refactor\_file\_test)

and s.major\_source\_extension

and (s.commits\_before\_3\_months > 9)

and (s.commits\_after\_3\_months > 9)

#### Scope conditions

Where

(not s.refactor\_file\_test)

and s.major\_source\_extension

and (s.commits\_before\_3\_months > 4)

and (s.commits\_after\_3\_months > 4)

#### Scope conditions, with next

Where

(not s.refactor\_file\_test)

and s.major\_source\_extension

and (s.commits\_before\_3\_months > 4)

and (s.commits\_after\_3\_months > 4)

And (s.commits\_after\_6\_months - s.commits\_after\_3\_months) > 4

#### Clean conditions, with next

where

(not s.refactor\_file\_test)

and s.major\_source\_extension

and (s.commits\_before\_3\_months > 9)

and (s.commits\_after\_3\_months > 9)

And (s.commits\_after\_6\_months - s.commits\_after\_3\_months) > 9

Group by f

Order by f

######## Refactor with corrective and adaptive

Select

Is\_refactor\_commit\_also\_fix

, is\_refactor\_commit\_also\_adaptive

, count(\*) as cnt

, count(distinct s.refactor\_repo\_name + s.refactor\_commit + s.file) as cases

, count(distinct s.refactor\_commit) as commits

, avg(bug\_ratio\_after\_3\_months - bug\_ratio\_before\_3\_months) as avg\_bug\_ratio\_diff\_3\_months

, STDDEV\_POP(bug\_ratio\_after\_3\_months - bug\_ratio\_before\_3\_months) as std\_bug\_ratio\_diff\_3\_months

, avg( if (bug\_ratio\_after\_3\_months < bug\_ratio\_before\_3\_months, 1, 0)) as avg\_imporve\_bug\_ratio\_3\_months

, avg( if (bug\_ratio\_after\_3\_months < bug\_ratio\_before\_3\_months -0.1, 1, 0)) as avg\_imporve\_bug\_ratio\_3\_months\_1

, STDDEV\_POP(if (bug\_ratio\_after\_3\_months < bug\_ratio\_before\_3\_months, 1, 0)) as std\_improve\_bug\_ratio\_3\_months

, avg(bug\_ratio\_after\_6\_months - bug\_ratio\_before\_6\_months) as avg\_bug\_ratio\_diff\_6\_months

, STDDEV\_POP(bug\_ratio\_after\_6\_months - bug\_ratio\_before\_3\_months) as std\_bug\_ratio\_diff\_6\_months

, avg( if (bug\_ratio\_after\_6\_months < bug\_ratio\_before\_6\_months, 1, 0)) as avg\_imporve\_bug\_ratio\_6\_months

, STDDEV\_POP(if (bug\_ratio\_after\_6\_months < bug\_ratio\_before\_6\_months, 1, 0)) as std\_improve\_bug\_ratio\_6\_months

, avg(1.0\*(bug\_hits\_after\_6\_months - bug\_hits\_after\_3\_months)/(commits\_after\_6\_months - commits\_after\_3\_months) - bug\_ratio\_before\_3\_months) as avg\_bug\_ratio\_diff\_n3\_months

, STDDEV\_POP(1.0\*(bug\_hits\_after\_6\_months - bug\_hits\_after\_3\_months)/(commits\_after\_6\_months - commits\_after\_3\_months) - bug\_ratio\_before\_3\_months) as std\_bug\_ratio\_diff\_n3\_months

, avg( if (1.0\*(bug\_hits\_after\_6\_months - bug\_hits\_after\_3\_months)/(commits\_after\_6\_months - commits\_after\_3\_months) < bug\_ratio\_before\_3\_months, 1, 0)) as avg\_imporve\_bug\_ratio\_n3\_months

, STDDEV\_POP( if (1.0\*(bug\_hits\_after\_6\_months - bug\_hits\_after\_3\_months)/(commits\_after\_6\_months - commits\_after\_3\_months) < bug\_ratio\_before\_3\_months, 1, 0)) as std\_improve\_bug\_ratio\_n3\_months

From

[citric-trees-187317:repo\_attributes.refactor\_stats\_with\_type] as s

#### Clean conditions

where

(not s.refactor\_file\_test)

and s.major\_source\_extension

and (s.commits\_before\_3\_months > 9)

and (s.commits\_after\_3\_months > 9)

#### Scope conditions

Where

(not s.refactor\_file\_test)

and s.major\_source\_extension

and (s.commits\_before\_3\_months > 4)

and (s.commits\_after\_3\_months > 4)

#### Scope conditions, with next

Where

(not s.refactor\_file\_test)

and s.major\_source\_extension

and (s.commits\_before\_3\_months > 4)

and (s.commits\_after\_3\_months > 4)

And (s.commits\_after\_6\_months - s.commits\_after\_3\_months) > 4

#### Clean conditions, with next

where

(not s.refactor\_file\_test)

and s.major\_source\_extension

and (s.commits\_before\_3\_months > 9)

and (s.commits\_after\_3\_months > 9)

And (s.commits\_after\_6\_months - s.commits\_after\_3\_months) > 9

Group by

Is\_refactor\_commit\_also\_fix

, is\_refactor\_commit\_also\_adaptive

Order by

Is\_refactor\_commit\_also\_fix

, is\_refactor\_commit\_also\_adaptive