

What Questions do Developers Ask During Code Review?

The internal process from start to finish

## Introduction

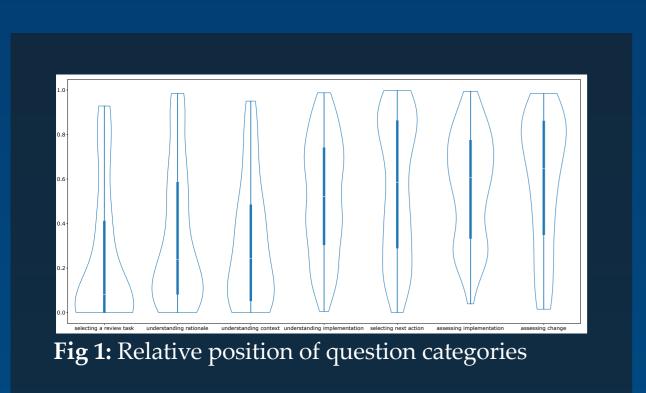
- More than 22 million hours spent daily on code reviews.

- Gap in research on internal process and questions during code reviews

- Knowledge of questions can improve tools, specifically AI-assistance.

## Method

- Ethnographic study
- 11 Participants
- 35 Recorded code review sessions







\* Get the extra fields (uid, timestamps, creator) for the table

if (in\_array(\$this->type, ['folder', 'file'], true)) {

\$keyLabelPair['uid'] = [
'value' => (int)\$this->row['uid']

SkevLabelPair['creation date'] = [

\$kevLabelPair['modification\_date'] = [

value' => BackendUtility::datetime(\$this->row['creation\_date']),

'fieldLabel' => htmlspecialchars(\$lang->sL('LLL:EXT:core/Resources

value' => BackendUtility::datetime(\$this->row['modification\_date']), 'fieldLabel' => htmlspecialchars(\$lang->sL('LLL:EXT:core/Resources/

'value' => BackendUtility::getProcessedValueExtra(\$this->table, 'uid', \$this->

'fieldLabel' => rtrim(htmlspecialchars(\$lang->sL('LLL:EXT:core/Reso

\$recordHistory = GeneralUtility::makeInstance(RecordHistory::class)

\$ownerUid = (int)(is\_array(\$ownerInformation) && \$ownerInformation['

foreach (['crdate' => 'creationDate', 'tstamp' => 'timestamp'];

if (isset(\$GLOBALS['TCA'][\$this->table]['ctrl'][\$field])) {

'value' => BackendUtility::datetime(\$this->row[\$GL

'fieldLabel' => rtrim(htmlspecialchars(\$lang->

\$keyLabelPair['creatorRecord'] = [ 'value' => \$creatorRecord,

e/Language/locallang\_general.xlf:LGL.creationUserId')), ':') 'isCreatorRecord' => true,

\$keyLabelPair[\$field] = [

'isDatetime' => true,

vate/Language/locallang\_general.xlf:LGL.' . \$label)), ':'),

\$ownerInformation = \$recordHistory->getCreationInformationForRecord(\$thi

\$creatorRecord = BackendUtility::getRecord('be\_users', \$ownerUid)

anguage/locallang\_core.xlf:show\_item.php.uid')), ':'),

locallang\_core.xlf:show\_item.php.uid')),

if (\$ownerUid) {

['ctrl'][\$field]]),

le]['ctrl'][\$field])) {

ralUtility::makeInstance(RecordHistory::class);

protected function getExtraFields(): array

\$lang = \$this->getLanguageService();

\$keyLabelPair = [];

- assessing change - assessing implementation

- selecting a review task

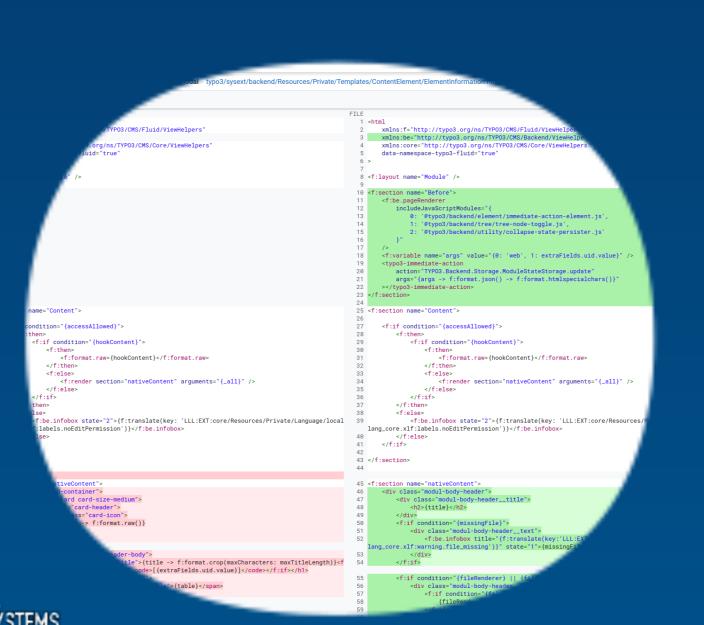
- selecting next action

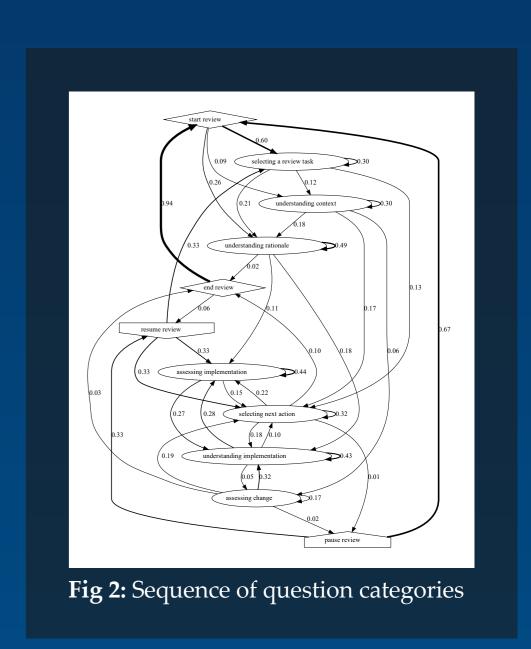
- understanding context

- understanding implementation

- understanding rationale

Distinct phases during the review with focus on different questions.





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