**RobocodeSPL questionnaire**

*Please, try to respond to all questions and provide as much comments as you want. We want to have a better understanding of how software product line adoption works and how to improve the education of software product line engineering.*

The text between { } is the kind of response that we require.

Thank you for your collaboration

# Domain analysis

## General questions for domain analysis

Before starting this project, have you heard about programming games?

{yes, no}

{comments}

Before starting this project, how expert/ how many knowledge did you have about:

The concept of feature modelling: {0 to 10}

Software product lines: {0 to 10}

Implementing a feature-based system: {0 to 10}

FeatureIDE or other variability modelling tool : {0 to 10}

Robocode: {0 to 10}

Java: {0 to 10}

{comments}

After finishing this project, how expert/ how many knowledge do you have about:

The concept of feature modelling: {0 to 10}

Software product lines: {0 to 10}

Implementing a feature-based system: {0 to 10}

FeatureIDE or other variability modelling tool : {0 to 10}

Robocode: {0 to 10}

Java: {0 to 10}

{comments}

Did you participate in the analysis of the Robocode domain by identifying features? Respond No if you only worked in the implementation part.

{yes, no}

{comments}

After this project, do you have a global view of the diversity of features in the domain?

{yes, no}

{comments}

How long did you take to understand how feature modelling works?

{comments}

## Concepts

Using your own words, what is a **feature** in the context of the Robocode SPL you have created?

{comments}

Using your own words, what is representing or how do you define the **robocode feature model** that you have created?

{comments}

Using your own words, can you define/explain the **robocode software product line** that you have created?

{comments}

# Domain implementation

## General questions for domain implementation

Did you participate in the implementation of the Robocode SPL by implementing features? Respond No if you only worked in the domain analysis part.

{yes, no}

{comments}

Independently of variability and features, how long did you take to understand the basic concepts of implementing a bot in robocode?

{comments}

## Feature implementation

**(skip this part if you have not implemented any feature)**

How many features did you implemented?

{number}

{comments}

When you want to implement a feature, which is your mental process? Please, explain like a flow diagram how do you go from the need to implement a given feature to the realization of the feature? (First I, … , then I… , in case of … I... , otherwise I… etc.)

{explanation of your flow chart}

{comments}

How many of those features you implemented by copy-pasting code snippets from the wiki?

{number}

{comments}

How many of those features you implemented by taking the code from an existing bot?

{number}

{comments}

How many of those features you implemented without using any existing code and just implementing from scratch according to the specification?

{number}

{comments}

How many of those features you implemented without any of the methods described before? Which method?

{number}

{comments}

In average, how much time it took you to implement a feature? (or, give a range; for example, between 1h for a small feature and 3h for a more complicated one.)

{time}

{comments}

In average, how much time it took you to adapt code taken from the wiki?

{time}

{comments}

In average, how much time it took you to adapt code taken from the code of an existing bot?

{time}

{comments}

In average, how much time did you expend analysing if your implemented feature is correct and the expected bot behavior is correct?

{time}

{comments}

Can you identify the main factors that made you to spend more or less time in a feature implementation?

{time}

{comments}

How much time it took you to understand the architecture of the Module bot (the way that bots are implemented in the Robocode SPL, the interfaces for the Parts etc.)?

{time}

{comments}

How difficult was to adapt existing code to the Module bot architecture of the Robocode SPL?

{comments}

Is any feature that was mentioned but you decided not to implement it? If “yes” then which ones and why?

{comments}

Is any feature that was not mentioned but you found it important to introduce/implement it? If “yes” then which ones?

{comments}

# SPL Project Management

How the domain analysis (feature identification) was planned and performed?

{comments}

How the work was split among the team members?

{comments}

Did you have on-going work in several features at the same time or you went one by one?

{comments}

Did you check if some features were related among them when splitting the work?

{comments}

Did you work more than one person for the implementation of features? If yes, explain in which cases the feature was implemented by you alone and in which cases the feature was implemented with more people.

{comments}

Did you find useful the color codes in the feature model to describe the implementation progress of features?

{comments}

In general, how was the team work? Did you identify any difficulty in planning? (this will be anonymous)

{comments}

Which tools did you use for the SPL project management?

{comments}

The tools you used for project management, were they adapted to the needs of an SPL project?

{comments}

If we consider the global time of the project, could you please tell us the distribution of your time for the following activities. The sum of the percentages must be 100%

Understanding Feature Modeling: {percentage}

Understanding FeatureIDE: {percentage}

Understanding the domain of Robocode: {percentage}

Adding and structuring features in the Feature Model: {percentage}

Implementation: {percentage}

{comments}

# General

Did you enjoy the project?

{comments}

Which part of the project did you enjoy the most?

{comments}

Which part of the project did you enjoy less?

{comments}

Which part of the project was the most difficult one for you?

{comments}

Which part of the project was the easiest one for you?

{comments}

How many hours per day/week did you expend working in this project? Can you estimate more or less the total number of hours?

{time}

{comments}

Do you have in mind possible extensions of this work?

{comments}