INSTITUTO SUPERIOR TÉCNICO
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Specification of Software 2015/16
2nd Project Report

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1 PROJECT ARCHITECTURE

This project is based on a set of signatures representing the elements of the model. Each signature can be seen as a class containing attributes, is this case, other signatures. To model the state, and allow the "passing of time" each function operates on the present instance of GitBob and return a new, changed one. The used signatures and their roles is the following:

Sig.Email A signature representing all the emails that users can register in GitBob

Sig.User A signature representing all the users that can register in GitBob

Sig.Reg_User A registered user is a signature with 3 relations, to respectively, one User, one Email and one Type. A diagram of a registered user can be seen in Figure 2.1

Sig.File A signature representing all the files than can be uploaded to GitBob

Sig.Reg_File A registered file is a signature that models the files when they are uploaded to GitBob. Is has 4 relations, one File, two Integers representing the size and version and one Reg_User, the owner. A diagram of a registered file can be seen in Figure 2.2

Sig.Type An abstract class representing the profile type. It is extended by the Signatures Basic and Premium. A diagram of the Signature Type and its extensions can be seen in Figure 2.3

Sig.Basic, Premium The extensions of the Signature Type

Sig.Mode An abstract class representing the possible sharing modes of a file. It is extended by the Signatures Regular, Secure and Readonly. A diagram of the Signature Mode can be seen in Figure 2.4

Sig.Regular, Secure, Readonly The extensions of the Signature Mode

Sig.GitBob This is the main signature of the model. It holds the set of registered users, the set of uploaded files and the relations that model the shares and modes of the uploaded files. This is also the signature that changes over time to allow that functions can operate over the model. The list of predicates that is allowed to change the state is defined in the fact "traces". A diagram of GitBob can be seen in Figure 2.5

2 MODELLING DIAGRAMS

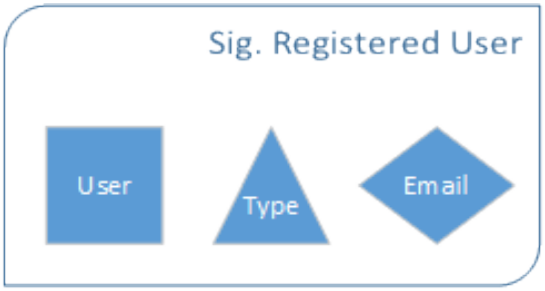

Figure 2.1:

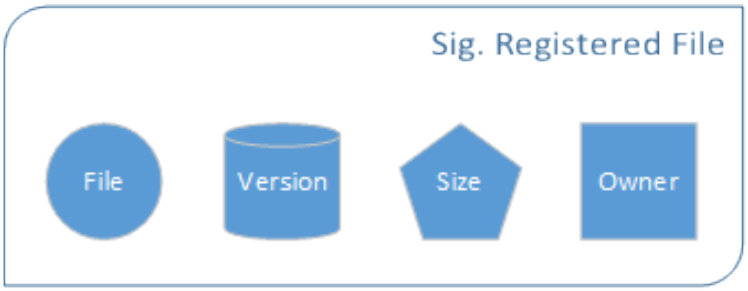

Figure 2.2:

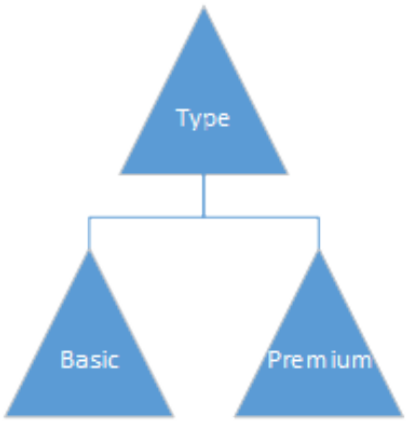

Figure 2.3:

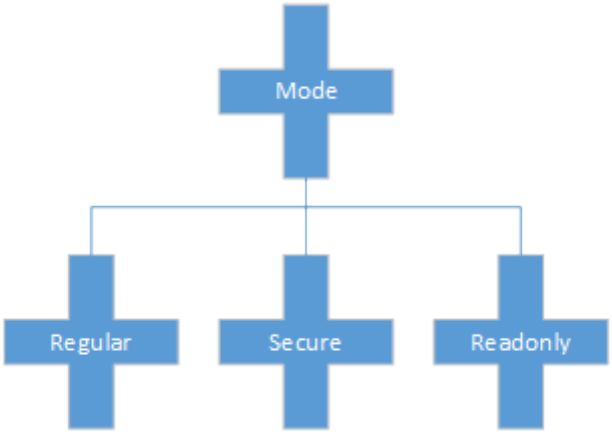

Figure 2.4:

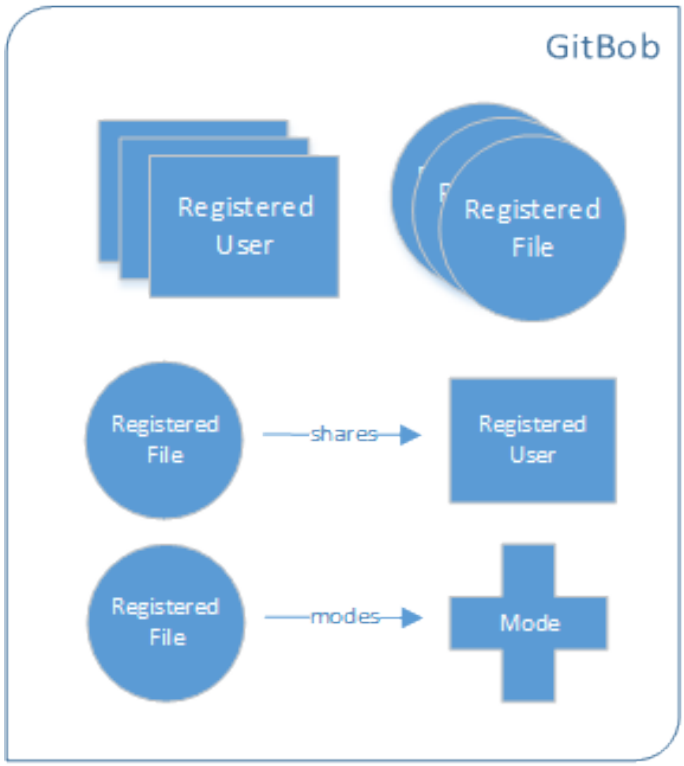

Figure 2.5: