

# Glide

## New Issue

### Introduction

Although Glide is being actively maintained and issues are being addressed through continuously integrating new merges, there are still [144 open issues](#) that are waiting to be resolved as of March 16th, 2020. Previously, we submitted a relatively trivial and minor [pull request](#) to add to their existing code base. For this part of the project, we will examine a real issue. This report documents our process of identifying a meaningful issue to resolve and providing a solution for a pull request.

## Second Issue and Pull Request

### Documentation

This [issue](#) describes a backward compatibility issue between Glide 4.8.0 and 4.10.0. In Glide version 4.8.0, the BaseRequestOptions class does not exist, which means when the code was compiled to the class file, the relationship between RequestOptions and BaseRequestOptions (parent-child) was not established. So when migrating from a higher to lower (i.e. 4.8.0) Glide version, the class file will not reference BaseRequestOptions and will not call the right methods.

To better understand the issue, we examined some of the key classes and their relationships in the current Glide version 4.10.0. The class that is missing from Glide 4.8.0 is BaseRequestOptions, which the RequestOptions class extends in the latest version. RequestOptions provides options for customizing how resources load with Glide, independent of the resource type. Then, the customized options are shared with RequestBuilder through a base object called BaseRequestOptions (Figure 1). Upon acknowledging the relationship among RequestBuilder, RequestOptions and BaseRequestOptions classes, we were able to guide our understanding of the issue.

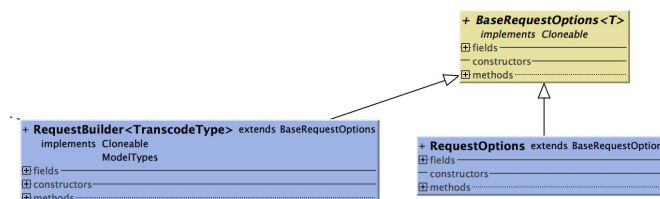


Figure 1

## Solution

This issue suggests that previously compiled .class file cannot find certain methods like the #placeholder method in the latest version of RequestOptions class. We were able to verify the differences between versions 4.8.0 and 4.10.0 and discovered that the #placeholder() method was defined in RequestOptions, and that the BaseRequestOptions class did not exist. On the other hand, in version 4.10.0, #placeholder() method is defined in the BaseRequestOptions class, which is inherited by RequestOptions class. When the #placeholder() method is called with 4.8.0 dependency, the previously compiled .class file will search for the method in RequestOptions, where it doesn't exist. To resolve the issue, we overwrote the #placeholder() method in the RequestOptions class, which will call its super class accordingly.

Our pull request for this issue can be viewed [here](#).

## Build Test - Result

The Travis CI build test failed with 1 error that is related to code format. From our previous documentation of the Glide's developer ecosystem and social context, we learned that the Glide team usually provides support in aligning any merge problems related to code style and format. Therefore, we have decided to take the route of getting their help in completing a successful build as the code itself does not alter the behavior of the system nor other essential functionalities.