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Software Engineering
UML Structural Modeling

Unified Modeling Language :

A UML diagram is a diagram based on the UML (Unified Modeling Language) with the purpose of visually representing a system along with its main actors, roles, actions, artifacts or classes, in order to better understand, alter, maintain, or document information about the system.
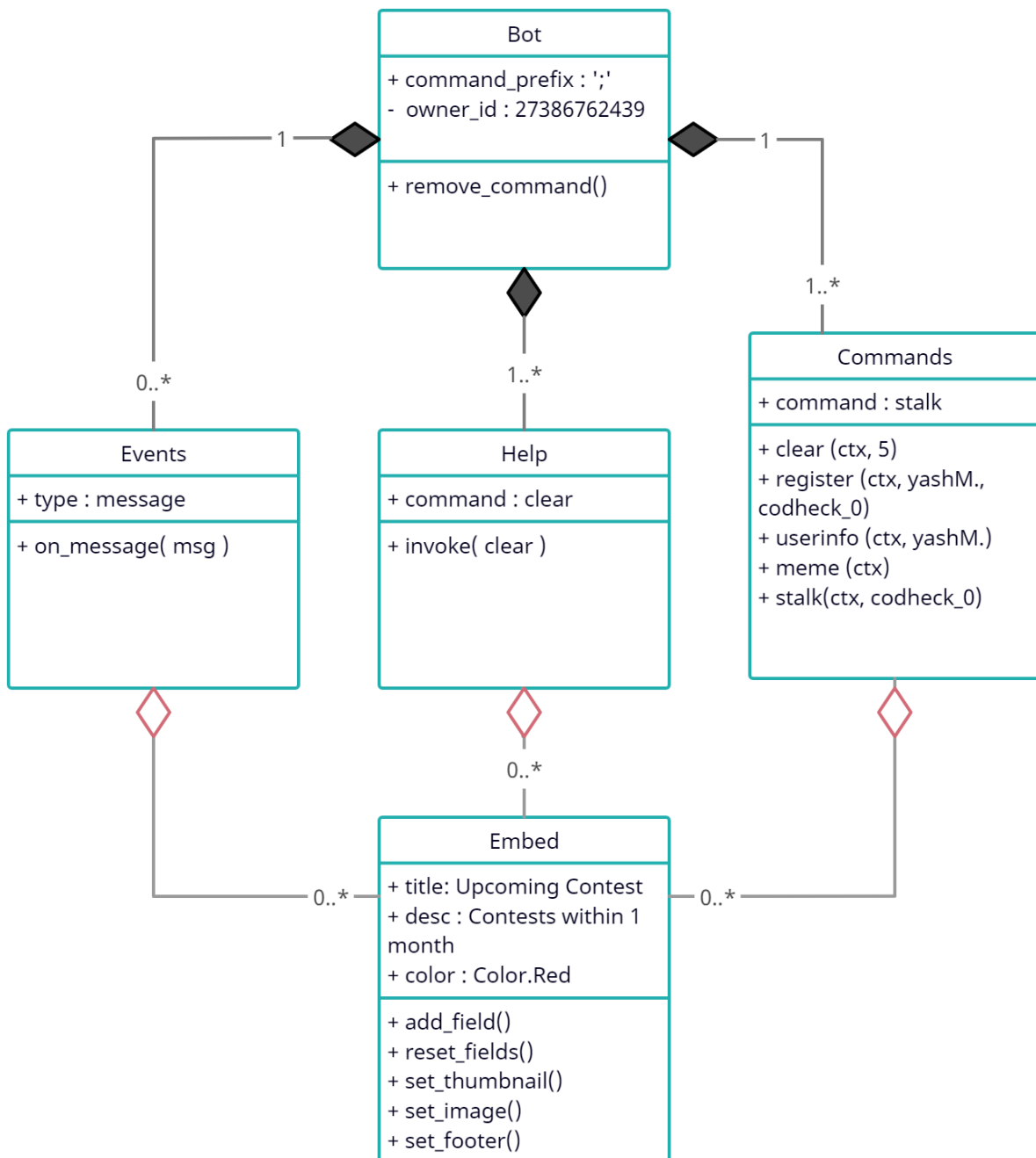
1. Class Diagram :

Class diagrams are the main building block of any object-oriented solution. It shows the classes in a system, attributes, and operations of each class and the relationship between each class.
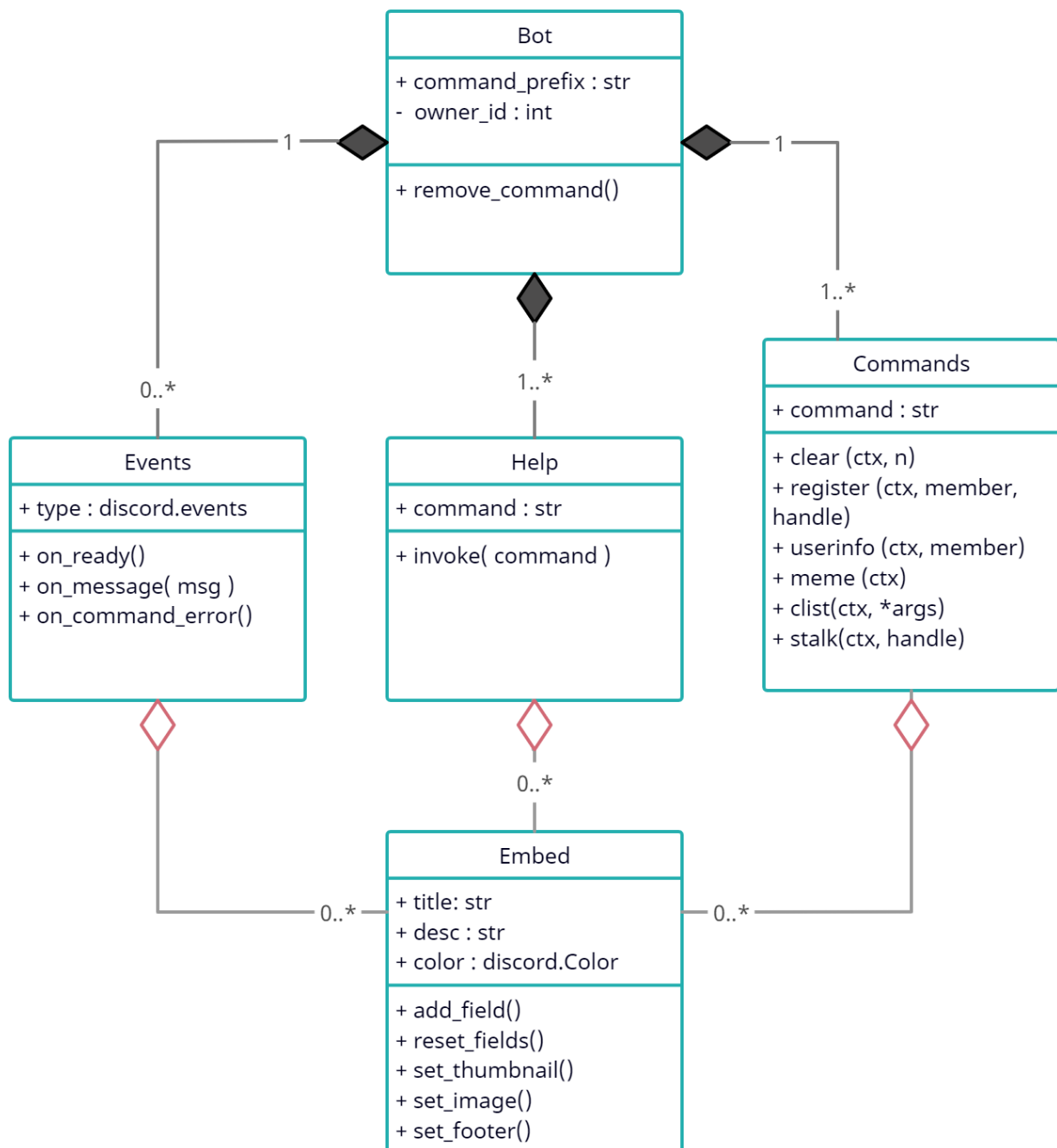
2. Objects diagrams :

Object Diagrams, sometimes referred to as Instance diagrams are very similar to class diagrams. Like class diagrams, they also show the relationship between objects but they use real-world examples.

Bot

+ command_prefix : ';'
- owner_id : 27386762439

+ remove_command()

Events

+ type : message

+ on_message(msg)

Help

+ command : clear

+ invoke(clear)

Commands

+ command : stalk

+ clear (ctx, 5)
+ register (ctx, yashM., codheck_0)
+ userinfo (ctx, yashM.)
+ meme (ctx)
+ stalk(ctx, codheck_0)

Embed

+ title: Upcoming Contest
+ desc : Contests within 1 month
+ color : Color.Red

+ add_field()
+ reset_fields()
+ set_thumbnail()
+ set_image()
+ set_footer()

1   1
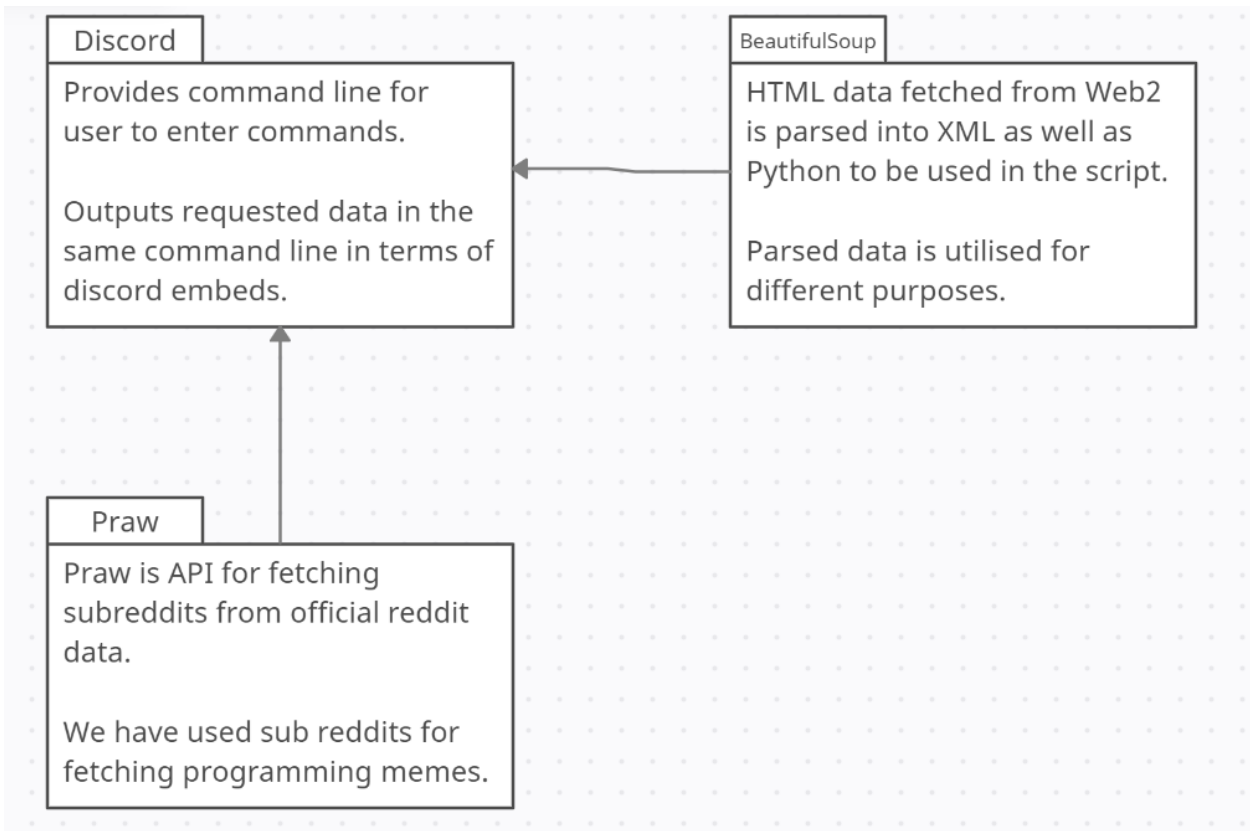0..*   1..*   1..*
0..*   0..*

3. Deployment diagrams :

A deployment diagram shows the hardware of your system and the software in that hardware. Deployment diagrams are useful when your software solution is deployed across multiple machines with each having a unique configuration. Below is an example deployment diagram.
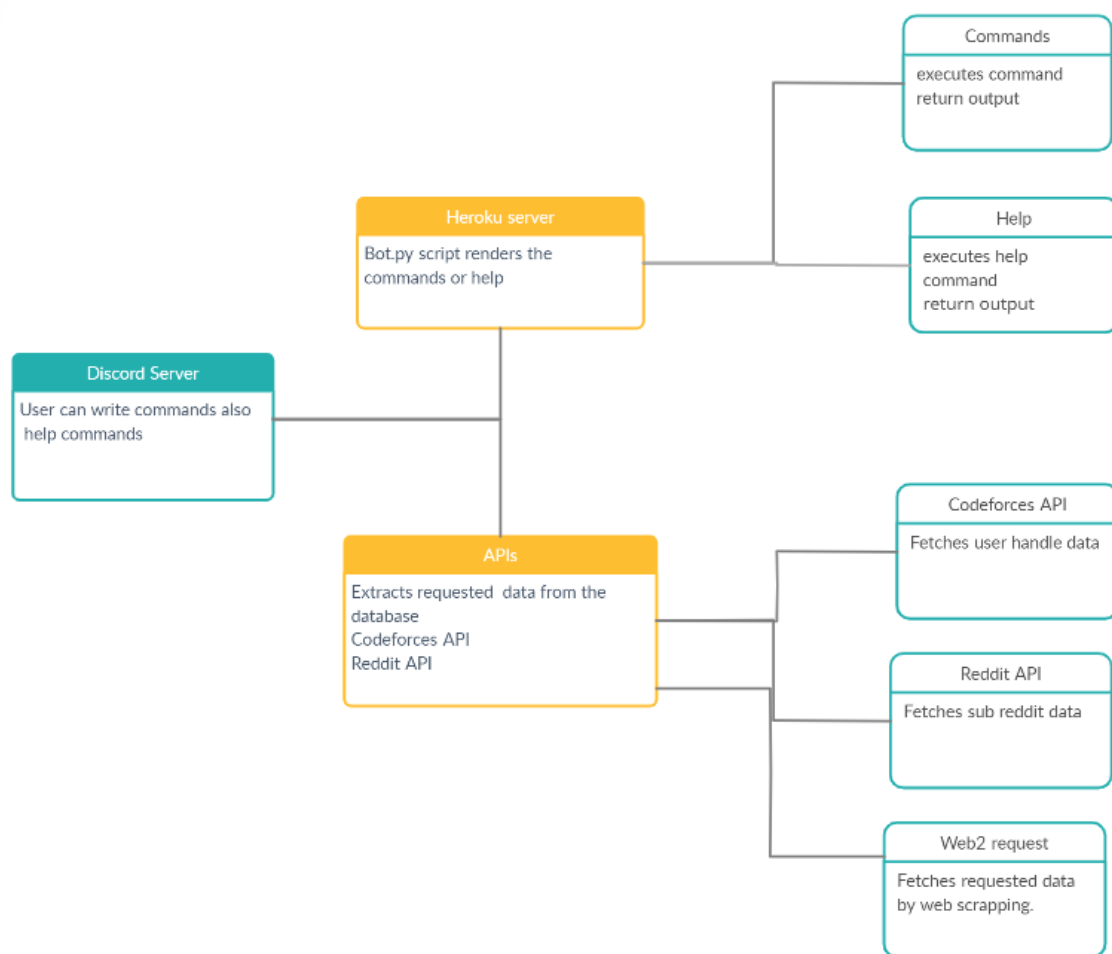
4. Package diagrams :

As the name suggests, a package diagram shows the dependencies between different packages in a system. Check out this wiki article to learn more about the dependencies and elements found in package diagrams.

Discord

Provides command line for user to enter commands.

Outputs requested data in the same command line in terms of discord embeds.

BeautifulSoup

HTML data fetched from Web2 is parsed into XML as well as Python to be used in the script.

Parsed data is utilised for different purposes.

Praw

Praw is API for fetching subreddits from official reddit data.

We have used sub reddits for fetching programming memes.

5. Component diagram :

A component diagram displays the structural relationship of components of a software system. These are mostly used when working with complex systems with many components. Components communicate with each other using interfaces. The interfaces are linked using connectors. The image below shows a component diagram.