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## CLASS: CPSC 362 Assignment 3

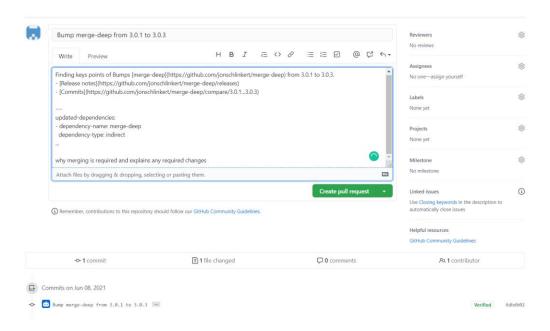
The open-source project chosen is about Kanban Board software. Kanban Board software is specifically developed for the agile project manager to help them while visualizing their work, maximum flow or efficiency, and limit the work-in-progress. Kanban Boards are using the columns, cards, and continuous improvement to assist the project team to commit the right work at the right time to complete it successfully.

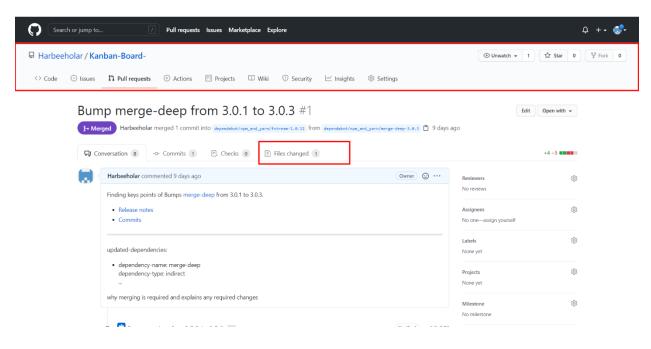
# Given below are the steps for the Pull/Commit and Merging.

The first code is pulled in the repository, and the link for the original code is

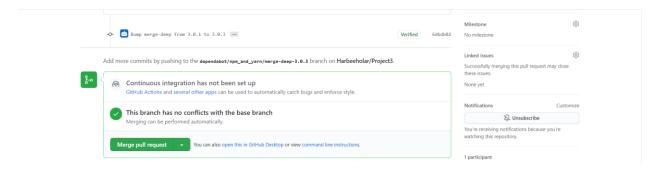
### https://github.com/Harbeeholar/Kanban-Board-

Pull request is opened for the updating dependencies and after updating the dependencies it needs to identify whether the project can run work efficiently or not.

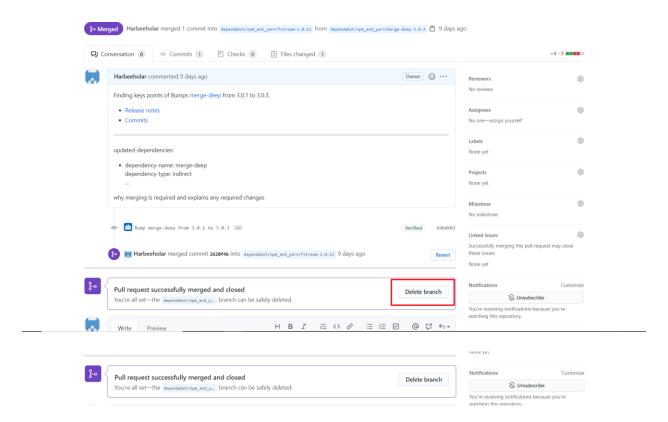




Commit is made in which all changes are updated and dependencies are updated.



Pull request is merged in the master file



Given below is the code for the new dependencies in the package and package-lock file

```
"dependencies": {
    "@mrmlnc/readdir-enhanced": {
        "version": "2.2.1",
        "resolved": "https://registry.npmjs.org/@mrmlnc/readdir-enhanced/-/readdir-enhanced-2.2.1.tgz",
        "integrity": "shas12-bPHp63i8b41szTOcaP63VInbb05Ny6dwAATtY6JTjh5N2OLrb5Qk/Th5cRkRQhkwCt+EJsYrNB0MiL+Gpn6e3g==",
        "requires": {
        "call-me-maybe": "^1.0.1",
        "glob-to-regexp": "^0.3.0"
    }
}
```

**Output:** Its dependency issue like it was not running and executing on the other operating system except Windows or even in some windows update it is not working perfect as well now it can support the Linux and kali as well

### **Development Setup**

For the installation, it just requires the visual studio to install or run the project the command used is "ext install vscode-kanban" using the Visual Studio Code and its Quick-Open option using the command CTRL+P

### **Pre-checking**

The repository includes the project management project tools and software projects. The new project added or included in the repository will be related to project management tools. Hence, other pre-check of the project includes:

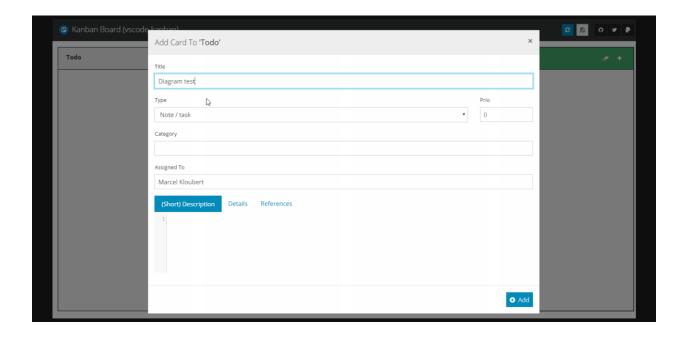
- Kanban Board
- The project lies under and used by the practitioner of project management
- Supports modern and latest programming approaches.
- Support general-purpose programming and development
- Sever some purpose

#### **Code Review**

Under-review by the reviewers or waiting for the response of the reviewer

### **Automated Testing and Check-in**

Unit tests are performed and the project will be run simply to review whether it was running like before or not after adding and merging the new dependencies for the system.



### **Architecture Description**

3- Tier architecture is used for the application as this project or software can also be deployed at the severing or online domain using a personal API token that can be identified in the profile settings. Additionally, three-tier architecture is a well-established and developed application architecture that organizes a project into three physical and logical tiers. In which, the first one is the presentation tier, 2<sup>nd</sup> is the user interface and 3<sup>rd</sup> one is the application tier where data processing is mainly performed and in the data tier all information and data associated is managed and stored. For the project, each tier is running its infrastructure, and tier development is performed simultaneously as well as would be scaled or updated without impacting any other and require extra tiers. Given below is the architecture of the application is given.

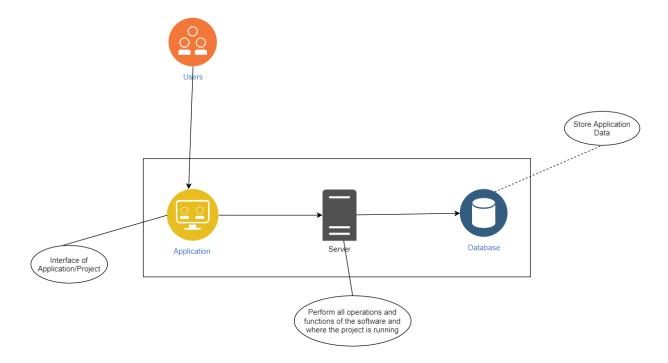
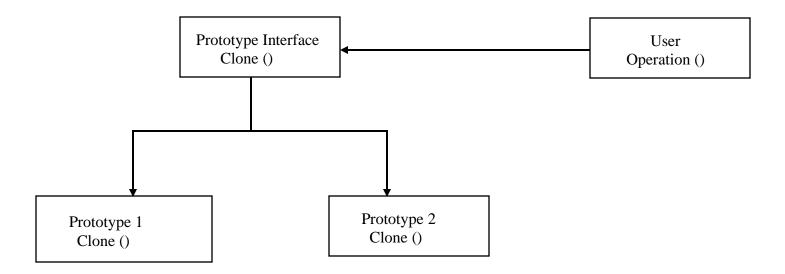


Figure No.1: Project Architecture

### **Design Pattern**

The design pattern used by the project is "Prototype" which is fully initialized by the instances that would be cloned or copied and refined based on the requirement of the developers and users. The code of the project used the abstract class that specified the pure method of virtual cloning and also maintain the cloneable or concrete derived classes. Also, the class required the polymorphic construction and its capability can derive itself from the base and abstract class that registers its prototypical object or instance and clone operation would be implemented. The client or any develop instead of writing the new invokes a new operation on the class that is hard-wired known as cloned over the abstract based class. This also supplies the string or enumerate the data type which can designate the class derived from the concrete and desired class particularly. Here below is the design pattern illustrate that how the pattern helps the developer to refine the code further and improve the chances.

Figure 2: Design Pattern



# References

Schmidt, R. F. (2013). Software engineering: Architecture-driven software development. Newnes.

Stephens, R. (2015). Beginning software engineering. John Wiley & Sons.