**Explanation Document**

**Mini Project Rakamin Academy – Backend Intern**

**By Muhammad Hamdi**

1. **How the data flow from users until back to user again**

There are many case scenario of data flow from user, so I’ll take one case as an example. In this case, I’ll use the scenario of **user adds new todo** as follows:

1. First, we assume that we already have one user registered in our server.
2. User sending POST request to server at /todos endpoint with ‘title’ params and ‘Authentication’ headers.
3. Server will check first if that end endpoint is exist or not in routes. If not, server will return with 404 status and not found messages as json. If exist, server will execute the controller that handle the endpoint.
4. In this endpoint, server will execute create method in TodosController class. But before that, server will check for valid request token and return user in application\_controller.rb. This will call AuthorizeApiRequest class that will check for authentication headers. If not exist, server will raise missing token exception. If exist, server will decode the token provided in authentication headers.
5. To decode the token, server will call decode methon in JsonWebToken class. If the token is invalid, server will raise the invalid token exception. If valid, server will call the find function in User class using that decoded token as params.
6. If user not found, server will raise invalid token exception. If found, the user object will returned.
7. After user object resolved, create method in TodoController will create todo with params from the POST request.
8. Server will send the new todo object as json response to user.
9. End.
10. **How the Ruby on Rails framework works.**