

## Endpoint Writeup for current functional endpoints

### Events.py

- GET /events/{eventid}: This endpoint returns a JSON response object back to the user queried by the eventID. `CREATE INDEX idx_event_id ON events (event_id);` adding an index on the eventID will improve performance by a simple lookup of an event by its actual ID. This results in improved query performance on local machines when filled with local entries.
- GET /events/: This endpoint returns all fights in an event that is queried by its event name. `CREATE INDEX idx_event_name ON events (event_name);` This will improve performance of the query by allowing faster lookup of events by names.
- Post event: Endpoint takes an event data type, formats into correct format to be inserted into the DB. Because this is an insert statement, there does not seem to be any specific indexes that would impact the performance of the post endpoint.

### Fighters.py

- GET /fighters/{id}: This endpoint returns the corresponding fighter by scanning the fighters db ids. Based off the result of EXPLAIN, the request just initiates a simple scan request based off the primary key (id), thus there is no other index we can use that will significantly increase performance of the endpoint.
- GET /fighters/: This endpoint returns a list of fighters filtered on the desired input of the user. Because the win and losses column is calculated through a series of joins of fighters and events, it would be optimal to insert an INDEX statement on these columns to help with the ordering and filtering and results; however this is all included within the body of the GET request.
- POST /fighters/: Similar to the POST call in Events.py, there does not seem to be any specific indexing we can do to enhance the performance of the endpoint.

### Fights.py

- GET /fights/{fight\_id}: This endpoint returns the desired fight and relevant information that is associated with the queried fight\_id provided from the front end. `CREATE INDEX idx_fight ON users (fight_id);` This index statement could help optimize lookup via the fight\_id index.
- POST /fights: This endpoint inserts a new fight entry into the fights DB, there are no indexing statements that can make a significant difference in performance of the request.