

# Budget Builder

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## Database Design

### Overview

For this project, I will be using a document based database through use of MongoDB. The objects I will be storing do not need a relationship to other objects. They will serve as information to be used within the business logic, but will not need to be tied to any other objects.

The user inputs will prompt the program to pull data from the database through a REST API. The return data will be used with the user inputs to calculate outputs for the user to use.

### Data Specifications

#### Work Items

This will be used to hold information about work items within the budget. It will hold data such as cost of materials, cost of labor, and expected work hours.

Document Structure:

```
{  
  "id": string,  
  "work_item": string,  
  "material_expense": int,  
  "labor_expense": int,  
  "labor_hours": int,  
  "notes": str  
}
```

#### Users

This will hold user login information to allow access to the website's functions

Document Structure:

```
{  
  "id": string,
```

```
"username": string,  
"hash": string  
}
```

## Purpose, Implementation, and Interactions

### Work Items

#### Purpose:

This is the information that the user's input will interact with in order to provide output of the completed budget comparison

#### Implementation:

When the user clicks "Submit", the browser will send a query for the information needed from the database. The API will query the database and send back the necessary data. The data will be computed with the user input to provide the results of the submission.

#### Interaction:

Users will input their data and get results back that compare their intended budget with the applications expected budget.

### Users

#### Purpose:

This will hold the login information of the website's users

#### Implementation:

The input username and password will be checked against the database records

#### Interaction:

On the homepage, users will input their username and password. This data will be checked and compared to the database information