**Group 1 SDS**

**1/23/2019**

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**Table of Contents**

1. **Product Description**
2. **Design Description**
   1. **System Parts**
      1. **Database**
      2. **Control Module**
      3. **User Interface**
      4. **Static Model**
      5. **Dynamic Model**
3. **Design Rationale**
4. **Prototypes**

**1. Product Description**

This product is a simple calendar web application which will look like a standard monthly calendar where the month and year is depicted at the top with the numbers in each box corresponding to the days. Above the calendar users are able to click arrow buttons to change the month that is displayed. The range of months are January 2018 to December 2020. It is meant to have a single user who can access it through a website.

Each day of a month will have boxes which will all initially be blank. The user is then able to click on a box and add an event that will contain the time and event description through a pop up box. In this popup box user will enter the start and end time (HH:MM) of the event in an input field, a description of the event, the priority of the event (high, medium, low), and the category of the event (home, school,work). After adding the event the user will be redirected back to the calendar view of the month they were viewing prior to adding an event.

If there are events that have already been added on the month that is being viewed, a marker will appear on the calendar indicating that an event is going to take place at that day. The user can hover over the day that has an event added to it and a pop up will show the user all the events scheduled for that day along with all the information the user previously added for each individual event.

When the user is viewing the days events they will also be able be given the option to delete or edit the event by clicking the corresponding buttons next to the events being displayed for the day. If a user clicks the delete button, the event will be removed from the day’s view. If the user clicks the edit button, they will be given a similar pop up to creating a new event, which will save the users changes.

**2. Design Description:**

**2.1 System Parts:**

**2.1.1 Database:** A SQL database that will contain User Event Data with the following fields and their relevant types:

* Id-int
* Date - Datetime
* Name - char
* Start time - Datetime
* End time - Datetime
* Description - char
* Priority
  + High - char
  + Medium - char
  + Low - char
* Categories
  + Work - char
  + Home - char
  + School - char

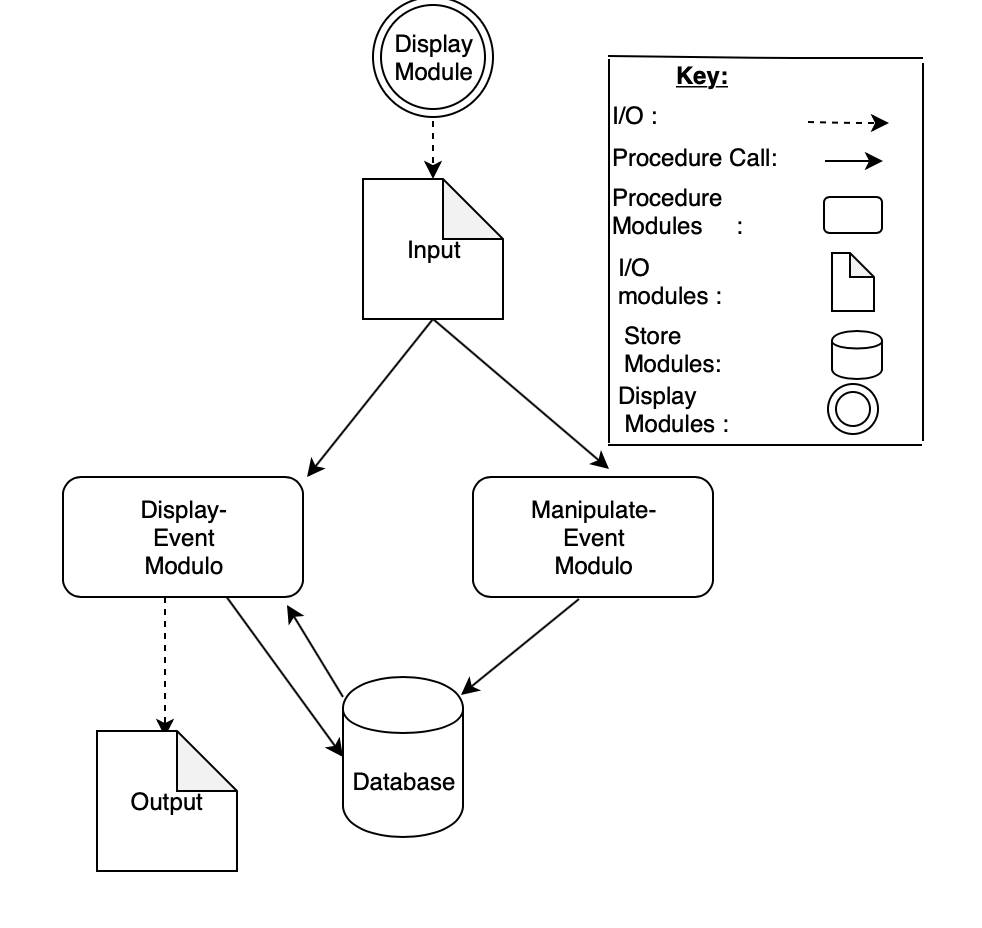
**2.1.2. Control Module:**

The control module contains functions that interact with our database described above. These functions include a add function which will execute when the user wants to add an event to the calendar, an edit function which changes a pre existing event information, and a delete function which deletes an event. These can all be invoked through the user interface. All these functions are written using PHP which allows us to implement the various SQL commands required to perform these functions.

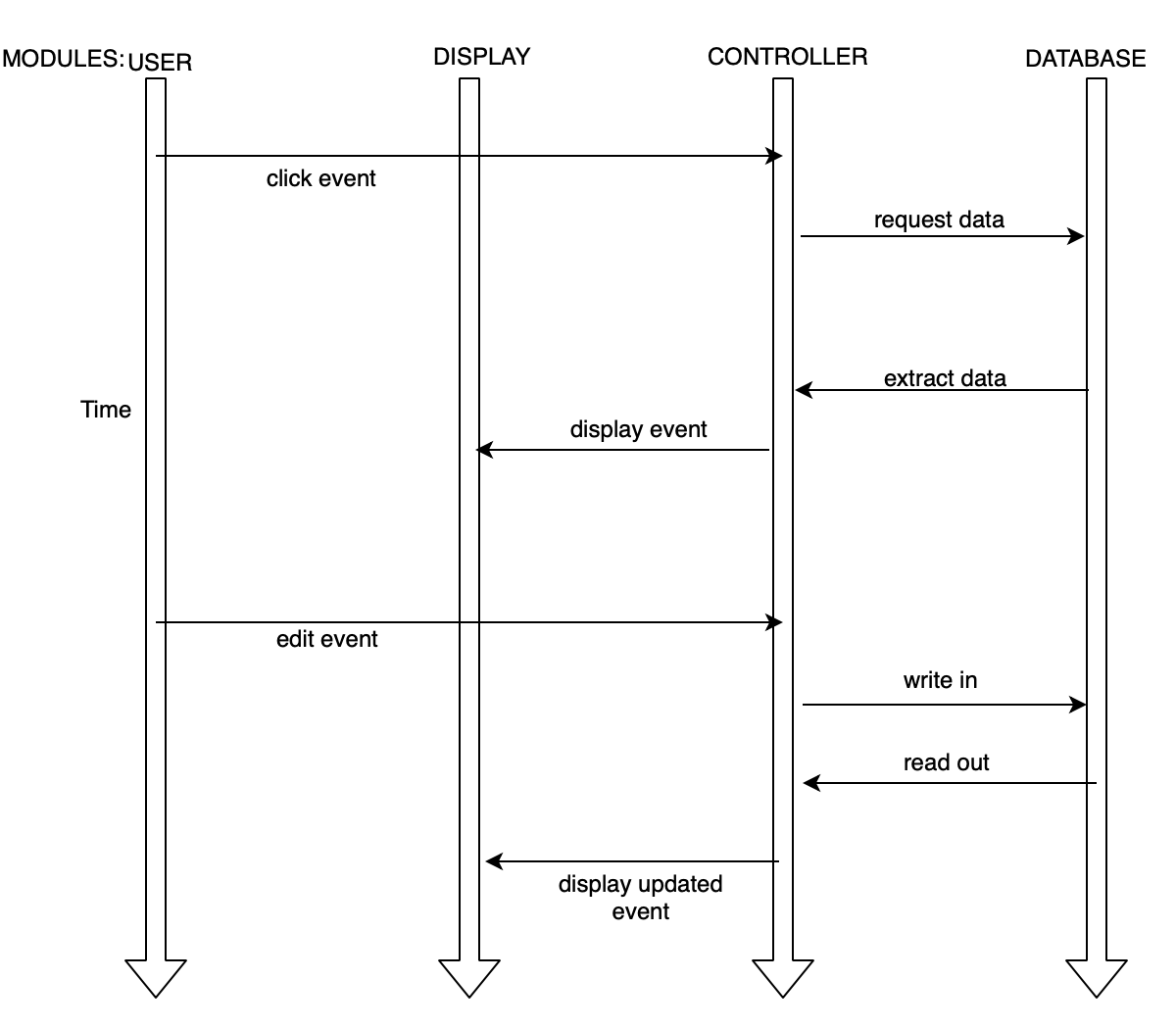
**2.1.3. User Interface:**

Initial Calendar view uses HTML, CSS, and Javascript for functionality. Users are able to scroll using a left and right arrow to find desired month which ranges from January 2018 to December 2020. When the desired month is found, users are able to see all days of that month and any days that have already had an event added to them which will be represented by a marker. When a user clicks on a date and an event has already been created, information regarding this event will be shown. User will also be able to edit and delete this pre-existing event a pop up box, which in part triggers the respective control module function. If a user clicks on a day that has no pre-existing events, the popup will appear blank.

**2.1.4 Static model**

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**2.1.5 Dynamic Model**

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**3. Design Rationale:**

Our design model that is explained in section 1 and 2 of this document was chosen as it provides an intuitive full month calendar design that is easy for the user to interact with. We have also eliminated the need to scroll by implementing a hover over function to view events on specific dates.

The main organizing principle that was implemented in our project design was the idea of modular programming. Modular programming is a software design technique that emphasizes separating the functional aspects of our program into individual modules. This allows more flexibility in dividing work amongst group members. It also allows independent modules that allow greater flexibility in division of work and easier debugging of our program as each function is contained to a specific module.

**4. Prototypes**

**4.1)** Front-end UI



This is the front end User Interface that will allow the user to interact with the calendar application. Each box is clickable, and the whole display will update as the user fills the database with events. The arrows to the left and right of the month and year allow the user to shift a month forwards or backwards by month. There is no functionality to skip forwards or backwards by year, the buttons only shift by month.