Teach Easy Requirements Specification

# **Teach Easy**

Bits Please! Version 1.0 9/19/2018

September 19, 2018

Teach Easy is the solution to the everyday problems faced by teachers across West Virginia. Our software is being developed out of necessity and requests from teachers in the state that are dissatisfied with their current software. Not only have our stakeholders complained about the usability of their current software, but the state is paying huge sums of money for these unusable softwares. Teach Easy is not only user friendly, but it is also open source (we're a FREE software)!

This idea originally came from a teacher who is currently very dissatisfied with their software that is being provided to them. We have heard complaints of small text boxes, highly limited options, and overall hard to use software. Teach Easy aims to provide the highest quality service possible for our clients and we enjoy getting feedback from our users so that we can improve and make them even happier with our company, software, and their experience.

What does Teach Easy do? We solve all our users problems. We are creating an easy one-stop-shop way to keep your schedule, notes, grades, and even state mandated lesson plans all in the same account. The administration will have an easy way to show the state what their teachers are doing and they'll have records of what was done. Each teacher's lesson plans will be in the same, easily readable format, which is great for quickly finding information in each school for the state administrators.

# **Table of Contents**

# 1.1.0 Glossary

| Administration | Someone within the school setting that holds authority   |
|----------------|--|
| Aesthetics     | The way something looks like; colors, shapes, etc.   |
| Database       | A collection of information/data that is stored in a table and is easily accessible, manageable, and updated                         |
| Error Message  | Message or text that appears once an error is encountered  |
| Flags          | Alerts the system  |
| In Scope       | Requirements that are planned to be accomplish within the time constraints   |
| Interface      | What the user sees and interacts with  |
| Launch         | When a new page loads and new content can be loaded  |
| Out of Scope   | Requirements that are planned to be implemented in the future, they are not the main concern for the time being                      |
| Рор Up         | A window that appears on the screen on the top layer of<br>content, usually smaller than the other content so it is still<br>visible |
| Program        | Collection of instructions that performs a specific task when executed by a computer   |
| Scope          | The entirety of what this project could encompass  |
| Software       | The programs and other operating information used by a computer  |
| System         | Refers to the Teach Easy software  |
| Redirected     | Change in direction, most commonly backwards   |
| User           | A teacher or administrator that is using the program   |

#### 2.1.0 Contributors

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#### 3.1.0 Product Description

Teach Easy is an open source product that creates an environment that is conducive to the teacher more easily molding the minds of students. The teacher will be able to manage grades, lessons, attendance, and more in this product.

#### 3.1.1 User Interface Description

When the user first opens the application, all users will see the same home screen, seen in Figure 1. All users will be pre-registered and will be given a username and password prior to logging in for the first time.



Figure 1

If the user fails to login, a "Login Fail" message will be displayed, as seen in Figure 2. This message will be displayed until the user enters valid login information.

| <b><i>TEACHEAS</i></b> |             |  |
|------------------------|-------------|--|
|                        | Log In      |  |
| User Name:             |             |  |
| Password:              |             |  |
|                        | Sign In     |  |
|                        | Log In Fail |  |
|                        |             |  |
|                        |             |  |

Figure 2

When the login information is successfully entered, the user will select the sign-in button below the username and password fields and the webpage will launch into the calendar feature. If the user has not saved information in the calendar previously, a blank calendar will launch on the screen. If the user has information that has been entered in the calendar before, the calendar displaying their previous information will launch, as in Figure 3.

| alendar      |    |  |             |    | Attendance    |    |                   |                            | Gradebo  | ok |
|--------------|----|--|-------------|----|---------------|----|-------------------|----------------------------|----------|----|
| October 2018 |    |  |             |    |               |    |                   |                            |          |    |
| Sunday       |    | Monday   | Tuesday     |    | Wednesday     |    | Thursday          | Friday                     | Saturday |    |
|              | 30 | 1<br>Lesson Plan<br>Appointment<br>Guest Speaker |             | 2  |               | 3  | 4<br>Lesson Plan  | Appointment                | 5        | 6  |
|              | 7  | 8  | Lesson Plan | 9  | Appointment   | 10 | 11                | Guest Speaker              | 12       | 13 |
| Appointment  | 14 | 15<br>Lesson Plan                                |             | 16 | Guest Speaker | 17 | 18<br>Lesson Plan |                            | 19       | 20 |
|              | 21 | 22   | Appointment | 23 |               | 24 | 25<br>Appointment | Lesson Plan<br>Appointment | 26       | 27 |
|              | 28 | 29   |             | 30 | 3             | 31 | 1                 |                            | 2        | 3  |

Figure 3

The user will select a date on the calendar to view any previous information entered on the specific date and will also have the opportunity to add new information, seen in Figure 4. If the user has previously entered information on that date, each title will be selectable, giving the user the opportunity to edit any information stored there.

| EAC      | H EASY        | 9          | User: Makayla Balle         | enge: |
|----------|---------------|------------|-----------------------------|-------|
| Calendar | ,             | Attendance | Gradebook                   | :     |
| M        | onday 10/1    | ·          | <b>x</b>                    | -     |
| Sunday   |               |            | 6                           | 5     |
|          | Lesson Plan   |            |                             |       |
|          | Appointment   |            | 13                          | \$    |
|          | Guest Speaker |            |                             |       |
| Notes    |               |            |                             |       |
|          |               |            | 27                          |       |
|          |               |            |                             |       |
|          |               |            | Add Lesson Plan Add Notes 3 | 5     |
|          |               |            |                             |       |

Figure 4

If the user selects a previous title, the information stored with that title will pop up and the user will be able to edit the title, the information in the text box, and will be given the option to save their changes or close the window, seen in Figure 5.

| EACHE                  | ASY  | User: Makayla Ballenge |
|------------------------|--|------------------------|
| Calendar               | Attendance                                       | Gradebook              |
| Guest Spe              | aker   | <b>X</b>               |
| Sunday<br>Description: |  | 6                      |
| Susan Lee giv          | res a talk about the harmful effects of bullying | g. 13                  |
| Notes                  |  | 20                     |
|                        |  | 27                     |
|                        |  | Save 3                 |
|                        |  |                        |

Figure 5

When the user selects, "Add Notes" from a selected date, a blank modal will appear that has two different fields, a Title field and a Description field. The user will have the ability to edit both fields and will be given the option to save their changes or close the window, seen in Figure 6. When they close the window, the program will return the user to the view in Figure 4.

| EACHEA              | ACH EASY |            |   | User: Makayla Ba |      |        |
|---------------------|----------|------------|---|------------------|------|--------|
| Calendar            |          | Attendance |   |                  | Grad | debook |
| Add Title           |          |            |   |                  | x    |        |
| Sunday Description: | _        | _          |   | _                |      | 6      |
|                     |          |            |   |                  |      | 13     |
| Notes               |          |            |   |                  |      | 20     |
|                     |          |            |   |                  |      | 27     |
|                     |          |            |   |                  | Save | 3      |
|                     |          | 1          | 1 |                  |      |        |

Figure 6

When the user selects, "Add Lesson Plan" from a selected date, a blank lesson plan template will launch on the screen. The user will be able to edit the title and will be able to enter text under each of the subtitles throughout the Lesson Plan, shown in Figures 7 & 8. The user will also have the option to "Print" or "Save" the Lesson Plan at the bottom of the template screen. The Save Option will save the information and return you to the screen as seen on Figure 4, with the user's new title added to the links.

| TEACH EASY      |               |  |  |  |  |  |
|-----------------|---------------|--|--|--|--|--|
| Title Of Lesson |               |  |  |  |  |  |
| Subject:        | Date Created: |  |  |  |  |  |
| Objectives:     |               |  |  |  |  |  |
| Information:    | Procedure:    |  |  |  |  |  |

Figure 7

| Materials/ Resources: | State Standards:<br>https://webtop.k12.wv.us/0/apps/tree/ |
|-----------------------|---|
| Notes:                |   |

Figure 8

### Below is a lesson plan that is in the process of being edited.

| Understanding Habitats                                     |                          |  |
|--|--------------------------|--|
| Subject: Science   | Date Created: mm/dd/yyyy |  |
| Objectives:  | 1                        |  |
| Students will be able to discuss why certain animals belor | g to their habitat.      |  |
| Information:   | Procedure:               |  |
| Ctudents will understand the significance of hebitation    | Lecture                  |  |
| animal belongs to and why the different traits animals     | Independent Practice     |  |
| have and how these traits help them survive.               | Closure                  |  |
|  |                          |  |
|  | Reflection               |  |
|  | Reflection               |  |

| Materials/ Resources:<br>PowerPoint Presentation<br>Habitat video<br>Pop Up Book<br>Activity handouts<br>Poster Board defining the categories of the habitats | State Standards:<br>https://webtop.k12.wv.us/0/apps/tree/<br>S. 1. GS. 5 – Use materials to design a solution to a human problem by<br>mimicking how plants and/or animals use their external parts to help<br>them survive, grow, and meet their needs.<br>S. 1. GS. 6 Read texts and use media to determine patterns in behavior<br>of parents and offspring that help offspring survive |
|---|--|
| Any extra notes   |  |

From the main calendar screen in Figure 3, if the user selects Attendance from the top toolbar, the attendance book will launch to the screen with the current 2-week date period. This is shown in Figure 9.

| Calendar Attendance        |                |                 |                   |                  |                |                |                 |                    |                   | Grad            | ebook           |
|----------------------------|----------------|-----------------|-------------------|------------------|----------------|----------------|-----------------|--------------------|-------------------|-----------------|-----------------|
| October Search: (MM/DD/YY) |                |                 |                   |                  |                |                |                 |                    |                   |                 |                 |
|                            | Monday<br>10/1 | Tuesday<br>10/2 | Wednesday<br>10/3 | Thursday<br>10/4 | Friday<br>10/5 | Monday<br>10/8 | Tuesday<br>10/9 | Wednesday<br>10/10 | Thursday<br>10/11 | Friday<br>10/12 | Total<br>Absent |
| Bowe,<br>Lonnie            | x              | x               |                   | x                | x              | x              | X               | x                  | x                 |                 | 8               |
| Cochran,<br>Brianna        |                |                 |                   |                  |                |                |                 |                    |                   |                 | 0               |
| Cook,<br>Jason             |                | x               |                   |                  |                |                |                 |                    |                   |                 | 1               |
| Cox,<br>Lauren             |                |                 |                   |                  |                |                |                 |                    |                   |                 | 0               |
| Davis,<br>Jordyn           |                |                 |                   |                  |                |                | x               |                    |                   |                 | 1               |
| Kent,<br>Kylie             |                |                 |                   |                  |                |                |                 |                    |                   |                 | 0               |
| Strand,<br>Matthew         |                |                 |                   |                  | x              |                |                 |                    |                   |                 | 1               |
| Williams,<br>Elliot        | x              |                 |                   | x                |                |                |                 |                    | x                 |                 | 3               |

Figure 9

If you return to the main calendar screen in Figure 3 and hover over the "Gradebook" selection in the top right, there will be a drop down menu allowing the user to select which class they would like to see the gradebook for. This is displayed in Figure 10.

| alendar Attendance |    |  |                   |                     |                  |                                    |                        |  |
|--------------------|----|--|-------------------|---------------------|------------------|------------------------------------|------------------------|--|
|                    |    |  | Oc                | tober 20            | 018              |                                    | Mathematics<br>Science |  |
| Sunday             |    | Monday   | Tuesday           | Wednesday           | Thursday         | Friday                             | Social Studies         |  |
|                    | 30 | 1<br>Lesson Plan<br>Appointment<br>Guest Speaker | 2                 | ;                   | 3 Lesson Plan    | 4 Appointment                      | 5 Arts                 |  |
|                    | 7  | 8  | 9<br>Lesson Plan  | 10<br>Appointment   | )                | 11 1<br>Guest Speaker              | 2 13                   |  |
| Appointment        | 14 | 15<br>Lesson Plan                                | 16                | 1'<br>Guest Speaker | 7<br>Lesson Plan | 18 1                               | 9 20                   |  |
|                    | 21 | 22   | 23<br>Appointment | 2.                  | Appointment      | 25 2<br>Lesson Plan<br>Appointment | 6 27                   |  |
|                    | 28 | 29   | 30                | 3                   | L L              | 1                                  | 2 3                    |  |

Figure 10

From the drop-down box, if the user selects Mathematics, their gradebook for Mathematics will launch to the screen. This page will show a list of the students to the far right, assignments across the top, a project average along the bottom, and each student's total in a column to the far right. This is shown in Figure 11.

| Calend              | lar                    |                      | Attendance           |                  |                       |          |                 |                |          | Gradebook |                    |  |
|---------------------|------------------------|----------------------|----------------------|------------------|-----------------------|----------|-----------------|----------------|----------|-----------|--------------------|--|
| Math                | ematic                 | S                    |                      |                  |                       |          |                 |                |          |           |                    |  |
| %                   | Long<br>Division<br>HW | Project<br>One Pt. 1 | Project<br>Two Pt. 2 | Set Theory<br>HW | Prime<br>Number<br>HW | Test One | Fractions<br>HW | Graphing<br>HW | Test Two | +         | Student<br>Average |  |
| Bowe,<br>Lonnie     | 90                     | 0                    | 55                   | 99               | 0                     | 100      | 66              | 96             | 89       |           | 66.11%             |  |
| Cochran,<br>Brianna | 65                     | 70                   | 100                  | 87               | 66                    | 99       | 75              | 87             | 21       |           | 74.44%             |  |
| Cook,<br>Jason      | 10                     | 89                   | 89                   | 72               | 32                    | 67       | 80              | 99             | 0        |           | 59.78%             |  |
| Cox,<br>Lauren      | 88                     | 85                   | 99                   | 0                | 70                    | 87       | 62              | 100            | 69       |           | 73.33%             |  |
| Davis,<br>Jordyn    | 76                     | 55                   | 69                   | 76               | 99                    | 69       | 46              | 88             | 67       |           | 71.67%             |  |
| Kent,<br>Kylie      | 98                     | 91                   | 77                   | 69               | 100                   | 0        | 68              | 80             | 22       |           | 67.22%             |  |
| Strand,<br>Matthew  | 100                    | 87                   | 86                   | 40               | 68                    | 70       | 100             | 0              | 73       |           | 69.33%             |  |
| Project<br>Average  | 75.29%                 | 68.14%               | 82.14%               | 63.29%           | 62.14%                | 70.29%   | 71.00%          | 78.57%         | 48.71%   |           |                    |  |

Figure 11

Hover over the Gradebook option on the top toolbar. From the drop-down box, if the user selects Science, their gradebook for Science will launch to the screen. This page will show a list of the students to the far right, assignments across the top, a project average along the bottom, and each student's total in a column to the far right. This is shown in Figure 12.

| Calen               | endar Attendance        |                  |               |                |          |                      |          |                 | Grad           | ebook |                    |
|---------------------|-------------------------|------------------|---------------|----------------|----------|----------------------|----------|-----------------|----------------|-------|--------------------|
| Scien               | ice                     |                  |               |                |          |                      |          |                 |                |       |                    |
| %                   | Changes in<br>Matter HW | Life Cycle<br>HW | Weather<br>HW | Project<br>One | Test One | Changing<br>Earth HW | Light HW | Organisms<br>HW | Project<br>Two | +     | Student<br>Average |
| Bowe,<br>Lonnie     | 90                      | 0                | 55            | 99             | 0        | 100                  | 66       | 96              | 89             |       | 66.11%             |
| Cochran,<br>Brianna | 65                      | 70               | 100           | 87             | 66       | 99                   | 75       | 87              | 21             |       | 74.44%             |
| Cook,<br>Jason      | 10                      | 89               | 89            | 72             | 32       | 67                   | 80       | 99              | 0              |       | 59.78%             |
| Cox,<br>Lauren      | 88                      | 85               | 99            | 0              | 70       | 87                   | 62       | 100             | 69             |       | 73.33%             |
| Davis,<br>Jordyn    | 76                      | 55               | 69            | 76             | 99       | 69                   | 46       | 88              | 67             |       | 71.67%             |
| Kent,<br>Kylie      | 98                      | 91               | 77            | 69             | 100      | 0                    | 68       | 80              | 22             |       | 67.22%             |
| Strand,<br>Matthew  | 100                     | 87               | 86            | 40             | 68       | 70                   | 100      | 0               | 73             |       | 69.33%             |
| Project<br>Average  | 75.29%                  | 68.14%           | 82.14%        | 63.29%         | 62.14%   | 70.29%               | 71.00%   | 78.57%          | 48.71%         |       |                    |

Figure 12

Hover over the Gradebook option on the top toolbar. From the drop-down box, if the user selects Social Studies, their gradebook for Social Studies will launch to the screen. This page will show a list of the students to the far right, assignments across the top, a project average along the bottom, and each student's total in a column to the far right. This is shown in Figure 13.

| Calend              | dar             | Attendance          |                    |                |          |                      |                   |                           | Gradebook      |   |                    |
|---------------------|-----------------|---------------------|--------------------|----------------|----------|----------------------|-------------------|---------------------------|----------------|---|--------------------|
| Socia               | l Studi         | es                  |                    |                |          |                      |                   |                           |                |   |                    |
| %                   | Timelines<br>HW | Pre-Civil<br>War HW | Civil<br>Rights HW | Project<br>One | Test One | Map<br>Reading<br>HW | World War<br>I HW | Great<br>Depression<br>HW | Project<br>Two | + | Student<br>Average |
| Bowe,<br>Lonnie     | 90              | 0                   | 55                 | 99             | 0        | 100                  | 66                | 96                        | 89             |   | 66.11%             |
| Cochran,<br>Brianna | 65              | 70                  | 100                | 87             | 66       | 99                   | 75                | 87                        | 21             |   | 74.44%             |
| Cook,<br>Jason      | 10              | 89                  | 89                 | 72             | 32       | 67                   | 80                | 99                        | 0              |   | 59.78%             |
| Cox,<br>Lauren      | 88              | 85                  | 99                 | 0              | 70       | 87                   | 62                | 100                       | 69             |   | 73.33%             |
| Davis,<br>Jordyn    | 76              | 55                  | 69                 | 76             | 99       | 69                   | <mark>46</mark>   | 88                        | 67             |   | 71.67%             |
| Kent,<br>Kylie      | 98              | 91                  | 77                 | 69             | 100      | 0                    | 68                | 80                        | 22             |   | 67.22%             |
| Strand,<br>Matthew  | 100             | 87                  | 86                 | 40             | 68       | 70                   | 100               | 0                         | 73             |   | 69.33%             |
| Project<br>Average  | 75.29%          | 68.14%              | 82.14%             | 63.29%         | 62.14%   | 70.29%               | 71.00%            | 78.57%                    | 48.71%         |   |                    |

Figure 13

Hover over the Gradebook option on the top toolbar. From the drop-down box, if the user selects Language Arts, their gradebook for Language Arts will launch to the screen. This page will show a list of the students to the far right, assignments across the top, a project average along the bottom, and each student's total in a column to the far right. This is shown in Figure 14.

| Calen               | dar              | Attendance      |          |                |          |               |                  |                | Gradebook      |   |                    |
|---------------------|------------------|-----------------|----------|----------------|----------|---------------|------------------|----------------|----------------|---|--------------------|
| Lang                | lage Ar          | ts              |          |                |          |               |                  |                |                |   |                    |
| %                   | Vocabulary<br>HW | Reading 1<br>HW | Essay HW | Project<br>One | Test One | Grammar<br>HW | Literature<br>HW | Spelling<br>HW | Project<br>Two | + | Student<br>Average |
| Bowe,<br>Lonnie     | 90               | 0               | 55       | 99             | 0        | 100           | 66               | 96             | 89             |   | 66.11%             |
| Cochran,<br>Brianna | 65               | 70              | 100      | 87             | 66       | 99            | 75               | 87             | 21             |   | 74.44%             |
| Cook,<br>Jason      | 10               | 89              | 89       | 72             | 32       | 67            | 80               | 99             | 0              |   | 59.78%             |
| Cox,<br>Lauren      | 88               | 85              | 99       | 0              | 70       | 87            | 62               | 100            | 69             |   | 73.33%             |
| Davis,<br>Jordyn    | 76               | 55              | 69       | 76             | 99       | 69            | 46               | 88             | 67             |   | 71.67%             |
| Kent,<br>Kylie      | 98               | 91              | 77       | 69             | 100      | 0             | 68               | 80             | 22             |   | 67.22%             |
| Strand,<br>Matthew  | 100              | 87              | 86       | 40             | 68       | 70            | 100              | 0              | 73             |   | 69.33%             |
| Project<br>Average  | 75.29%           | 68.14%          | 82.14%   | 63.29%         | 62.14%   | 70.29%        | 71.00%           | 78.57%         | 48.71%         |   |                    |

Figure 14

#### 4.1.0 Requirements

Teach Easy is a product that is being created to make organization and information storage easy for Elementary School teachers in West Virginia. This product will contain pages to manage the classroom necessities such as a calendar, gradebook, and attendance.

#### 4.1.1 In Scope

In the scope of this project are the things that we plan to implement within the time constraints.

- Users
- Log In (minimal security)
- Database/DBA to manage information
- Calendar
  - Lesson plans
  - Notes
- Gradebook
  - Grade entry
    - Percentages only
  - Drop down menu to select desired gradebook
  - Ability to add a new assignment
  - Calculate assignment/class average
  - Ability to edit pre existing grades
- Attendance
  - Track number of absences
  - Search attendance by date
  - Displays 2 weeks at once

#### 4.1.2 Out of Scope

Things that will not necessarily be covered in this project, but they are good features that may be added in the future or if time permits within the time constraints.

- Multiple Grade Scales for the gradebook
- Multiple Classes for each teacher
- Allow the teachers to add/ remove students from classes
- Theme choices (change the aesthetics to a custom color pallet)
- Lesson plans with the ability to upload files
- Produce Report cards for each student/ class reports
- Allow students to have accounts so they can view their grades, etc.

- Seating Charts
- Allow the teacher to choose whether they mark absence, attendance, or both
- Automated password recovery
- Autosave feature
- Administrator Screens

#### 4.2.0 Stakeholders

The stakeholders are people from various disciplines that have some investment in this project, either directly or indirectly.

- Teachers (users)
- Administrators
- Group Members
- Mr. Bowe
- Board of Education
- Individual Schools
- Students

### **4.3.0 Technical Requirements**

The requirements needed are basic computer skills, access to a web based device, and the device must be connected to the internet.

### 4.3.1 Developer Requirements

- Database
  - PHP
  - SQL
  - HTML
- Web Technologies
  - $\circ$  HTML
  - CSS
  - JavaScript
  - Bootstrap Framework
  - PHP
  - SQL
  - Packages(Calendar, Data Tables)

| Identifier | Priority | Description   |
|------------|----------|---|
| REQ-01     | 3        | System will allow user to select different gradebooks depending on subject.     |
| REQ-02     | 3        | System will allow user to add a new assignment to a specific gradebook.         |
| REQ-03     | 3        | System will automatically calculate Assignment and class averages.              |
| REQ-04     | 3        | System will allow the entry of grades.  |
| REQ-05     | 2        | System will allow the editing of pre existing grades.                           |
| REQ-06     | 3        | System will store lesson plans  |
| REQ-07     | 2        | System will provide a completable form for each lesson plan                     |
| REQ-08     | 3        | System will allow the user to save the lesson plan on a specific date           |
| REQ-09     | 2        | System will allow the editing of lesson plans                                   |
| REQ-10     | 2        | System will convert a lesson plan form to a printable format                    |
| REQ-11     | 3        | System will allow the user to save changes to the Attendance Book               |
| REQ-12     | 3        | System will allow the user to mark an absence in the Attendance Book            |
| REQ-13     | 3        | System will allow the user to remove a marked absence in the Attendance Book    |
| REQ-14     | 2        | System will allow the user to search for a specific date in the Attendance Book |
| REQ-15     | 3        | System will open a calendar as the homepage.                                    |
| REQ-16     | 3        | System will display notes and lesson plans in the calendar.                     |

# 4.4.0 Table of Technical Requirements

| REQ-17 | 3 | System will use a modal on click in order to display the contents of a single day in the calendar.   |
|--------|---|--|
| REQ-18 | 2 | System will allow the user to alter the notes and lesson plans created for each day.   |
| REQ-19 | 1 | System will auto fill the text boxes and allow the user to edit the details for each item.   |
| REQ-20 | 3 | System will redirect the user to a new page to handle the lesson plan creation and editing.  |
| REQ-21 | 2 | System will not allow the user to log in without a username and password.  |
| REQ-22 | 5 | System logs in the user when a correct username and password is entered.   |
| REQ-23 | 2 | System will not login a user that enters an<br>incorrect username or password. The system will<br>throw an error message if the username and<br>password is wrong. |
| REQ-24 | 2 | System will inform the user that there log in by displaying their name in the top right corner.  |
| REQ-25 | 3 | System logs out the user   |

#### 5.1.0 Characters

• The software is only used by West Virginia Elementary Education teachers, administrators, and technical support teams within the school systems.

### 6.1.0 Assumptions

- A teacher has one classroom for a school calendar year.
- Every classroom has one teacher.
- Teachers are given their username and password by administration with all their class information pre-loaded, the instructor does NOT have access to altering their class lists.
- The user has basic computer skills, internet access, and network connection.

#### 7.1.0 Dependencies

- Teacher depends on the administration to give them their username, password.
- The Teach Easy software depends on another Software system called X. Software X is only accessible by the administration in which their can store, load, and tracks classrooms and teachers' information
- The Teach Easy software depends on internet access and network connection to function.

#### 8.1.0 User Cases

• Log in and Log out

#### Username/Password unknown

| UC-01                 | The user does not know their username or password   |
|-----------------------|---|
| Related Requirements: | REQ-22  |
| Initial Actors:       | User  |
| Actors goal:          | To gain access to their<br>username and password so,<br>they can log in   |
| Participating Actors: | User, Website, Database,<br>Administration  |
| Preconditions:        | Systems log in web page must<br>be loaded and opened  |
| Postconditions:       | After the user gains access to<br>their username and password,<br>they can proceed to log in  |
| Flow of events:       | <ul> <li>&gt; 1. User does not know their<br/>username or password</li> <li>&gt; 2. User will have to contact<br/>the administration to get their<br/>username and password</li> <li>&gt; 3. Once the user knows their<br/>username and password they<br/>can load the log-in web page</li> <li>&gt; 4. User can proceed to log in<br/>like normal</li> </ul> |

| UC-02                 | The user enters the correct username and password  |
|-----------------------|--|
| Related Requirements: | REQ-23, REQ-15   |
| Initial Actors:       | User   |
| Actors goal:          | The user logs in successfully  |
| Participating Actors: | User, Website, Database  |
| Preconditions:        | Systems log in web page must<br>be loaded and opened   |
| Postconditions:       | Upon logging in successfully<br>with the correct username and<br>password, the system will then<br>load the homepage   |
| Flow of events:       | <ul> <li>&gt; 1. The user enters the websites URL address</li> <li>&gt; 2. The system loads the log-in webpage</li> <li>&gt; 3. The user enters a correct username and password</li> <li>&gt; 4. The systems then logs in the user successfully</li> <li>&gt; 5. The system then loads the homepage</li> </ul> |

# Successful Log in

# Fail Log in

| UC-03                 | The user enters the wrong<br>username and password<br>causing the log-in system to<br>fail |
|-----------------------|--|
| Related Requirements: | REQ-24   |
| Initial Actors:       | User   |
| Actors goal:          | The user log-in attempt fails<br>due to incorrect username and<br>password                 |

| Participating Actors: | User, Website, Database   |
|-----------------------|---|
| Preconditions:        | Systems log in web page must<br>be loaded and opened  |
| Postconditions:       | The system throw an error<br>message if the username and<br>password is wrong   |
| Flow of events:       | <ul> <li>&gt; 1. The user enters the websites URL address</li> <li>&gt; 2. The system loads the log-in webpage</li> <li>&gt; 3. The user enters an incorrect username or password</li> <li>&gt; 4. The systems then flags an error message saying "Log in fail."</li> <li>&gt; 5. The user then can retry to enter the correct username and password</li> </ul> |

# User is Log in

| UC-04                 | The user wants to check that<br>they are logged in as<br>herself/himself                |
|-----------------------|---|
| Related Requirements: | REQ-23, REQ-25  |
| Initial Actors:       | User  |
| Actors goal:          | User logged in as the correct person  |
| Participating Actors: | User, Website, Database   |
| Preconditions:        | The user must log in the Teach<br>Easy Software   |
| Postconditions:       | In the top right corner, the<br>correct user's first name and<br>last name is displayed |
| Flow of event:        | - > 1. The user enters the  |

### Log Out

| 8                     |  |
|-----------------------|--|
| UC-05                 | The user can log out of the software   |
| Related Requirements: | REQ-25, REQ-22   |
| Initial Actors:       | User   |
| Actors goal:          | The user can successfully log<br>out of the Teach Easy Software  |
| Participating Actors: | User, Website, Database  |
| Preconditions:        | The user must log in the Teach<br>Easy Software  |
| Postconditions:       | The software successfully logs<br>out the user and redirects to<br>the log-in web page.  |
| Flow of events:       | <ul> <li>&gt; 1. The user enters the websites URL address.</li> <li>&gt; 2. The system loads the log-in webpage</li> <li>&gt; 3. The user enters a correct username and password</li> <li>&gt; 4. The systems then load the homepage</li> <li>&gt; 5. In the top right corner, there is a logout</li> <li>&gt; 6. User clicks the logout button</li> <li>&gt; 7. The system then goes</li> </ul> |

# • Calendar Event Click

# • Adding a note

#### Create

| UC-06                 | Creating a new note   |
|-----------------------|---|
| Related Requirements: | REQ-16, REQ-17  |
| Initial Actors:       | User  |
| Actors goal:          | Create a new note for the day selected in the calendar  |
| Participating Actors: | Website, User, Database   |
| Preconditions:        | System will need to load the<br>home page and the user will<br>need to be logged in   |
| Postconditions:       | Upon clicking save, the note<br>will be saved to the database<br>and displayed in the calendar  |
| Flow of Events:       | <ul> <li>&gt; 1. User clicks on the desired date in the calendar</li> <li>&gt; 2. From the modal that appears, the user will select the "Add Note" button</li> <li>&gt; 3. The system provides the note form that the user will fill out</li> <li>&gt; 4. The user selects save and the database stores the information</li> <li>&gt; 5. The website will return to the calendar view and will show the Note title on the corresponding date</li> </ul> |

| UC-07                 | Editing a note   |
|-----------------------|--|
| Related Requirements: | REQ-16, REQ-17, REQ-18,<br>REQ-20  |
| Initial Actors:       | User   |
| Actors goal:          | To edit a pre-existing note  |
| Participating Actors: | Website, User, Database  |
| Preconditions:        | System will need to have the<br>user logged in, the calendar<br>modal for a specific date pulled<br>up, and the note for editing<br>must be selected   |
| Postconditions:       | Upon clicking save the changes<br>that the user makes will be<br>saved over the previous version<br>that the database stored   |
| Flow of Events:       | <ul> <li>&gt; 1. User clicks on the date<br/>that the note is in on the<br/>calendar</li> <li>&gt; 2. From the modal, the user<br/>selects the note from the list of<br/>information stored at that date</li> <li>&gt; 3. The system presents the<br/>form for the user to edit</li> <li>&gt; 4. The user makes their<br/>changes and selects save</li> <li>&gt; 5. The system returns the<br/>user to the calendar</li> </ul> |

### Edit

- Lesson Plan
  - Create

Save

| UC-08                 | Creating a new lesson plan  |
|-----------------------|---|
| Related Requirements: | REQ-07, REQ-08  |
| Initial Actors:       | User  |
| Actors goal:          | Create a new lesson plan  |
| Participating Actors: | Website, User, Database   |
| Preconditions:        | System will need to load the lesson plan form   |
| Postconditions:       | Upon clicking save, the lesson<br>plan title will be stored and will<br>appear on the calendar  |
| Flow of Events:       | <ul> <li>&gt; 1. User clicks on the desired date in the calendar</li> <li>&gt; 2. From the modal that appears, the user will select the "Add Lesson Plan" button</li> <li>&gt; 3. The system provides the lesson plan form that the user will fill out</li> <li>&gt; 4. The user selects save and the database stores the information</li> <li>&gt; 5. The website will return to the calendar view and will show the lesson plan title on the proper date</li> </ul> |

### • Edit

- Autofill
- Save

Editing a lesson plan

| Related Requirements: | REQ-06, REQ-07, REQ-08,<br>REQ-09  |
|-----------------------|--|
| Initial Actors:       | User   |
| Actors goal:          | To edit a pre-existing lesson<br>plan  |
| Participating Actors: | Website, User, Database  |
| Preconditions:        | System will need to load the stored lesson plan  |
| Postconditions:       | Upon clicking save the changes<br>that the user makes will be<br>saved over the previous version<br>that the database stored   |
| Flow of Events:       | <ul> <li>&gt; 1. User clicks on the date that the lesson plan is in on the calendar</li> <li>&gt; 2. From the modal, the user selects the lesson plan from the list of information stored at that date</li> <li>&gt; 3. The system presents the form for the user to edit</li> <li>&gt; 4. The user makes their changes and selects save</li> <li>&gt; 5. The system returns the user to the calendar</li> </ul> |

### Print

| UC-10                 | Printing a lesson plan |
|-----------------------|------------------------|
| Related Requirements: | REQ-06, REQ-10         |
| Initial Actors:       | User                   |

| Actors goal:          | To print a saved lesson plan  |
|-----------------------|---|
| Participating Actors: | Website, User, Database   |
| Preconditions:        | System will need to load the stored lesson plan   |
| Postconditions:       | Upon clicking print, the system<br>provides a printable format to<br>print using the operating<br>system's printing abilities   |
| Flow of Events:       | <ul> <li>&gt; 1. User clicks on the date that the lesson plan is in on the calendar</li> <li>&gt; 2. From the modal, the user selects the lesson plan from the list of information stored at that date</li> <li>&gt; 3. The system presents the form for the user to edit</li> <li>&gt; 4. The user selects print</li> <li>&gt; 5. The system returns a printable version of the lesson plan</li> </ul> |

### • Attendance

### Save

| UC-11                 | Saving Attendance Book   |
|-----------------------|--|
| Related Requirements: | REQ-11   |
| Initial Actors:       | User   |
| Actors goal:          | To save changes to the<br>Attendance Book                            |
| Participating Actors: | Website,User   |
| Preconditions:        | System will have displayed<br>Attendance Book that was last<br>saved |

| Postconditions: | Upon clicking save, the system<br>will save the changes to the<br>Attendance Book and that will<br>be shown the next time the<br>Attendance Book is opened  |
|-----------------|---|
| Flow of Events: | <ul> <li>&gt; 1. User clicks on Attendance<br/>from menu</li> <li>&gt; 2. The Attendance Book<br/>launches to the screen</li> <li>&gt; 3. User makes any changes<br/>to the Attendance Book</li> <li>&gt; 4. User clicks Save button</li> <li>&gt; 5. Attendance Book is saved</li> </ul> |

# Mark Absences Only

Г

| UC-12                 | Marking Attendance in the<br>Attendance Book  |
|-----------------------|---|
| Related Requirements: | REQ-12  |
| Initial Actors:       | User  |
| Actors goal:          | To mark student absences in the Attendance Book   |
| Participating Actors: | Website,User  |
| Preconditions:        | System will have displayed<br>Attendance Book with list of<br>student names that was last<br>saved                                  |
| Postconditions:       | Upon clicking to add an<br>absence, the system will add an<br>'X' in the box for a student on<br>that certain date                  |
| Flow of Events:       | <ul> <li>&gt; 1. User clicks on Attendance<br/>from menu</li> <li>&gt; 2. The Attendance Book<br/>launches to the screen</li> </ul> |

|  | -> 3. User clicks in a box for a<br>certain student on a certain<br>date to mark student absent<br>-> 4. 'X' appears in the box<br>where the user clicked |
|--|---|
|--|---|

### Remove Absence

| UC-13                 | Removing an Absence in the<br>Attendance Book  |
|-----------------------|--|
| Related Requirements: | REQ-12, REQ-13   |
| Initial Actors:       | User   |
| Actors goal:          | To remove a student absence(s)<br>in the Attendance Book   |
| Participating Actors: | Website,User   |
| Preconditions:        | System will have displayed<br>Attendance Book with list of<br>student names that was last<br>saved; The user will have<br>placed an 'X' to mark an<br>absence previously   |
| Postconditions:       | Upon clicking to remove an<br>absence, the system will<br>remove an 'X' that was<br>previously in the box for a<br>student on that certain date  |
| Flow of Events:       | <ul> <li>&gt; 1. User clicks on Attendance<br/>from menu</li> <li>&gt; 2. The Attendance Book<br/>launches to the screen</li> <li>&gt; 3. User clicks in a box for a<br/>certain student on a certain<br/>date that has previously been<br/>marked absent with an 'X'</li> <li>&gt; 4. 'X' is removed from the<br/>box where the user clicked</li> </ul> |

# • Date Display/Search

2 weeks are displayed

### Error message

| UC-14                 | Searching for a Date Range in<br>the Attendance Book  |
|-----------------------|---|
| Related Requirements: | REQ-14  |
| Initial Actors:       | User  |
| Actors goal:          | To access a specific date in the<br>Attendance Book   |
| Participating Actors: | Website,User  |
| Preconditions:        | System will have already<br>launched and displayed<br>Attendance Book with the<br>current system date showing<br>that 2-week range  |
| Postconditions:       | Upon searching for the date,<br>the system will load the<br>2-week range that the<br>searched-for date appears in   |
| Flow of Events:       | <ul> <li>&gt; 1. User clicks on Attendance<br/>from menu</li> <li>&gt; 2. The Attendance Book<br/>launches to the screen</li> <li>&gt; 3. User clicks in search box<br/>and types a date in<br/>[mm/dd/yyyy] format and<br/>clicks the search button</li> <li>&gt; 4a. If the user enters an<br/>invalid date format, an error<br/>message will appear and return<br/>to the same Attendance screen</li> <li>&gt; 4b. If a correct date has been<br/>entered, the Attendance Book<br/>will load with the 2-week range<br/>that the searched-for date falls</li> </ul> |

under

### • Gradebooks

| indification to the desired fra | lacoon   |
|---------------------------------|--|
| UC-15                           | Navigating to desired<br>gradebook   |
| Related Requirements:           | REQ-01   |
| Initial Actors:                 | User   |
| Actors goal:                    | To select a specific gradebook   |
| Participating Actors:           | Website, User  |
| Preconditions:                  | System will need to preload the subjects the teacher teaches   |
| Postconditions:                 | Upon clicking on a subject from<br>the drop down menu the user<br>will be taken to the subjects<br>gradebook   |
| Flow of Events:                 | <ul> <li>&gt; 1. User clicks on gradebook<br/>from menu</li> <li>&gt; 2. From the drop down box<br/>that appears, the desired<br/>subject is selected</li> <li>&gt; 3. Specific gradebook is<br/>loaded</li> </ul> |

### Navigating to the desired gradebook

### New Assignment

| UC - 16               | New Assignment       |
|-----------------------|----------------------|
| Related requirements: | REQ-02               |
| Initial actors:       | User                 |
| Actors Goal:          | Add a new Assignment |

| Participating Actors: | Website, User   |
|-----------------------|---|
| Preconditions:        | System will have preloaded the students and previous assignments  |
| Postconditions:       | New assignment will be saved<br>and formatted to fit with the<br>other assignments  |
| Flow of Events:       | <ul> <li>&gt; 1.User will click on the plus<br/>sign that will add a new column<br/>for a new assignment</li> <li>&gt; 2. User will input the title of<br/>the assignment and the grades<br/>related to it</li> <li>&gt; 3. The user then clicks on<br/>the save button to save the<br/>changes</li> <li>&gt; 4.System saves changes</li> </ul> |

- Checking averages
  - Student
  - Class assignment

| UC- 17                | Calculating averages                                  |
|-----------------------|---|
| Related Requirements: | REQ-03  |
| Initial actors:       | System  |
| Actor Goal:           | Calculate class and assignment averages               |
| Participating Actors: | Website, System                                       |
| Preconditions:        | Grades for the class will need to already be included |
| Postconditions:       | The class and student averages                        |

|                 | will be displayed in their own row and column   |
|-----------------|---|
| Flow of Events: | <ul> <li>&gt; 1. Grades for each student<br/>for a assignment is entered</li> <li>&gt; 2. System adds up each row<br/>and divides by the number of<br/>students</li> <li>&gt; 3. Value is converted to a<br/>percent</li> <li>&gt; 4. Value is displayed below<br/>the grades in bottom most row</li> </ul> |
|                 | Repeat all steps for class<br>average but add up the<br>columns,divide by the number<br>of assignments, and display<br>value in leftmost column<br>instead.   |

- Grade entry
  - Error Messages
  - Percentages only
  - Alert user of low grades by color

| UC - 18               | Grade entry                                      |
|-----------------------|--|
| Related Requirements: | REQ-04   |
| Initial Actors:       | User   |
| Actor Goal:           | Enter a grade successfully                       |
| Participating Actors: | Website, User, System                            |
| Preconditions:        | Assignments preloaded into<br>gradebook already  |
| Postconditions:       | Grades entered are saved and formatted by system |
|                       |  |

| Flow of Events: | -> 1.User enters grades  |
|-----------------|--|
|                 | If grade entered is not a valid<br>input return error message that<br>specifies what type needs to be<br>entered. Repeat step 1  |
|                 | <ul> <li>&gt; 2.System highlights grades<br/>entered that are failing in red</li> <li>&gt; 3.User clicks save button to<br/>save changes</li> <li>&gt; 4.System saves changes</li> </ul> |

# Editing grades

| UC - 19               | Grade editing   |
|-----------------------|---|
| Related Requirements: | REQ-05  |
| Initial Actors:       | User  |
| Actor goal:           | Edit pre existing grade   |
| Participating Actors: | User, System, Website   |
| Preconditions:        | Grades and assignments need<br>to already exist   |
| Postconditions:       | Changes to grades need to be saved  |
| Flow of events:       | -> 1.User clicks on an existing<br>grade they wish to change<br>-> 2.User types in new grade                                    |
|                       | If new grade entered is not a<br>valid input return an error<br>message specifying the type of<br>input it needs. Repeat step 2 |
|                       | <ul> <li>-&gt; 3. User clicks save button to<br/>save changes</li> <li>-&gt; 4. System saves changes</li> </ul>                 |

### 9.1.0 Summary of Changes

This section will be added to during the development phases as changes are made to our requirements in order to better suit the needs of the stakeholders.