

# **Form Buster**

## **Software Requirements Specifications**

**Version 1.0**

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# Contents

## Introduction

1. Background
2. Goals
3. Client
4. Customer
5. Other Stakeholders

## Project Constraints

6. Partner or Collaborative Applications
7. Schedule Constraints

## Overall Description

8. Current Situation
9. Hands-on Users of the System
10. User Interactions with the System
11. Use Cases

## Functional Requirements

12. General
  - 12a. System
  - 12b. Starting a Form
  - 12c. Form Records
  - 12d. Notifications
13. Student
  - 13a. Starting a Form
  - 13b. Tracking a Form
  - 13c. Retracting a Form
  - 13d. Dashboard
  - 13e. Notifications
  - 13f. Form Records
14. Faculty
  - 14a. Starting a Form
  - 14b. Tracking a Form
  - 14c. Approving a Form
  - 14d. Dashboard
  - 14e. Notifications
  - 14f. Form Records
15. Student Coordinator
16. Staff
  - 16a. Administration Tasks
  - 16b. Form Processing
  - 16c. Notifications

## **Nonfunctional Requirements**

17. Usability Requirements

18. Performance Requirements

19. Security Requirements

# Introduction

## 1. Background

Currently, a student may wonder who has signed a form they have submitted, if it has been approved by all faculty required/declined by a faculty (and why), or even forgotten about. To alleviate these issues, Form Buster will provide a tracking system for all student forms which will show the student who has signed the form so far, who still needs to sign it, or if a faculty member has declined and show his or her reason.

Another issue that has happened is that students have blamed academic advisors for not graduating on time. To alleviate this issue, Form Buster will make the registration advising process between the faculty advisor and the student verifiable, by saving the approved document in the student's folder for later retrieval.

## 2. Goals

Form Buster wants to make the form submission process efficient, allow students to know the exact details of their form status, and make the student and academic advisor registration agreement verifiable.

## 3. Client

The client of this product is Dr. Philip Chan, a Computer Science professor at the Florida Institute of Technology.

## 4. Customer

The customer of this product is the Florida Institute of Technology, and potentially other universities at a later time.

## 5. Other Stakeholders

Among other stakeholders, we have:

- Faculty members
- Staff members
- Student Coordinators
- Students

## Project Constraints

### 6. Partner or Collaborative Applications

Form Buster will ideally work with the university's user authorization system, this will be used when staff, faculty, students and student coordinators are signing into Form Buster. Form Buster will also work with the university's student information database which will provide Form Buster with necessary information about a student, such as their student i.d., address, phone number, etc., which will be used to store information along with user-entered, form specific, information. The constraint thus resides in the fact we won't be allowed to use those existing systems, but simulate them instead.

### 7. Schedule Constraints

The project is scheduled to be completed over a 9 month period (starting in August and ending in April) over 6 evaluation milestones, 3 of which are known to be Oct 1, 2018, Oct 29, 2018 and Nov 26, 2018. The project can however be modified after to fit the university's current system, if they choose to adopt it.

## Overall Description

### 8. Current Situation

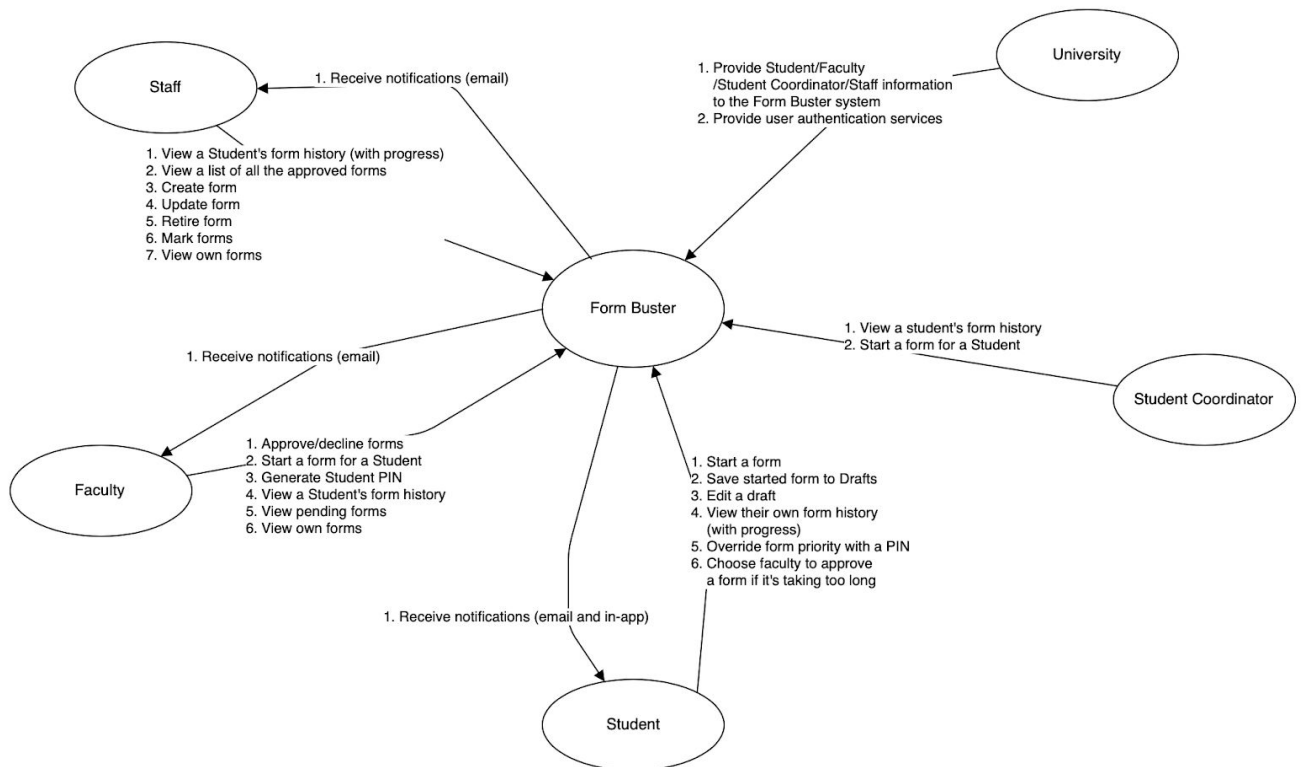
The current Fall 2018 university system is to visit the student coordinator's office, where they will determine what form the student needs. The student coordinator will email the form to the student. The student will then fill out the pdf form, save it and email it back to the student coordinator. The student coordinator will research what faculty members will need to sign the form (which is contingent on the student; student's have different academic advisors, and different majors which will vary the Department Head, for example). The student coordinator will also have to manually drag flags to appropriate fields on the pdf, these flags represent which faculty member should provide information, what information they should provide, and where (such as a signature and or date). The student coordinator also specifies the order in who the document should be sent to. The form will then be submitted via DocuSign, where the faculty members will sign with an e signature and submit the form. The approved form will then be sent off to the respective office to do final processing. Faculty members do not have their own account with DocuSign, as a result they save the emails sent by DocuSign, and a student coordinator also prefers to save her files in her email, even though she has an account.

## 9. Hands-On Users of the System

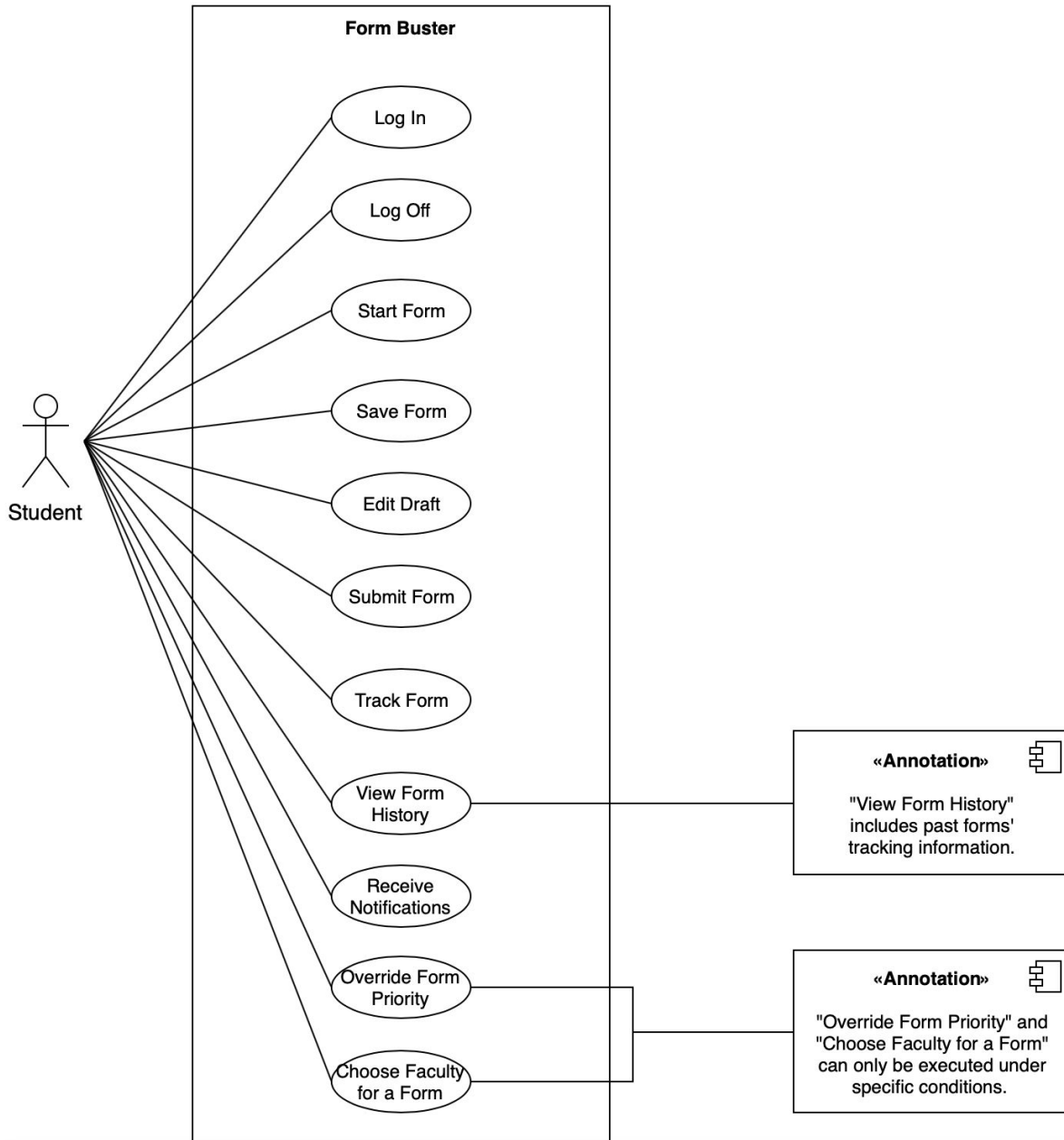
Faculty, staff, student coordinators, and students will all be users of this device. The student will submit the form to be approved by the appropriate faculty members, and then the appropriate staff department will receive the form and process it, if approved. Student coordinators and faculty members will use the system to assist students with starting forms, if needed, as well as verifying a student's past registered courses.

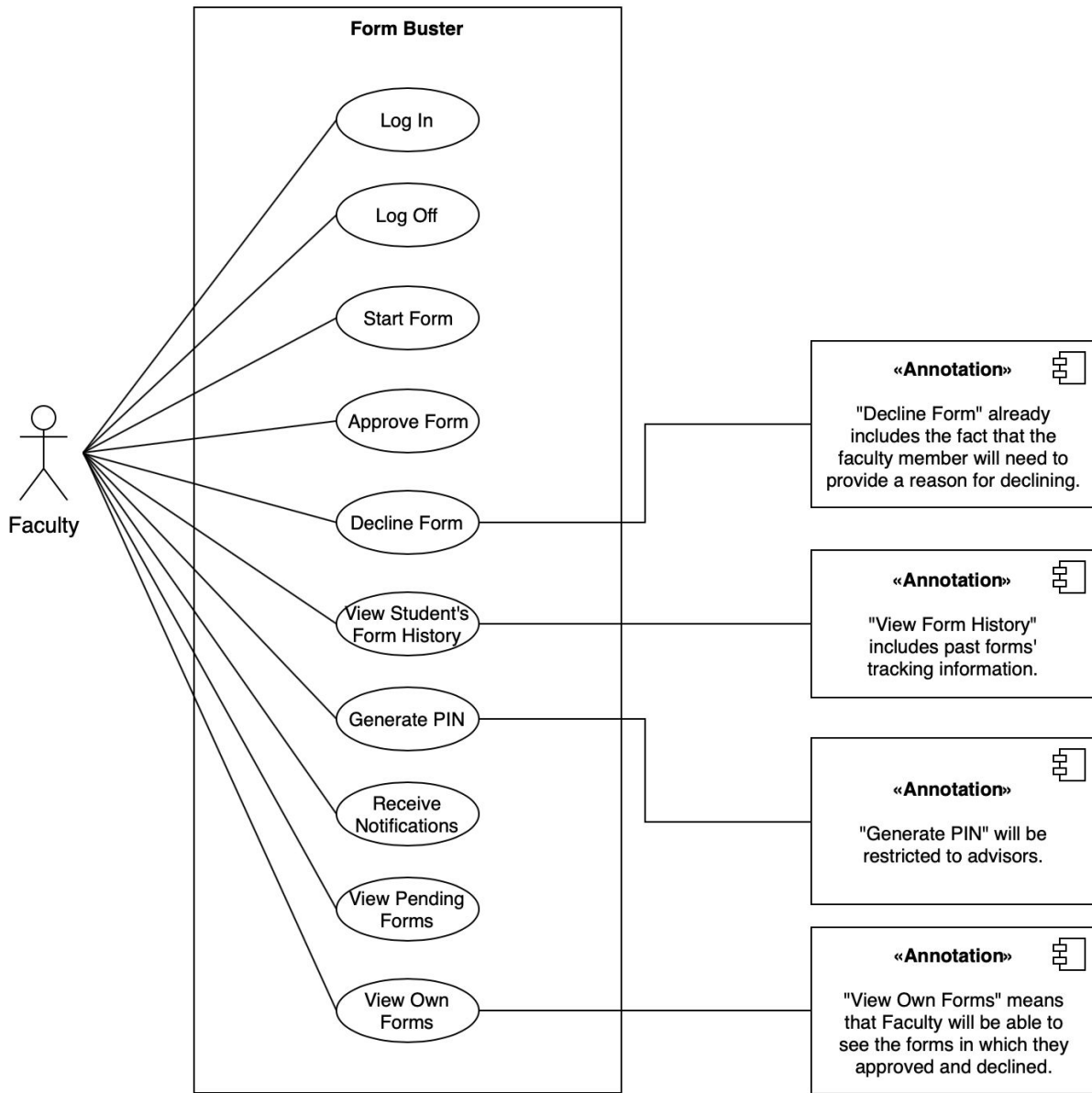
## 10. User Interactions with the System

The context diagram for Form Buster shows various stakeholders and their interactions with the application. Below is a list of the stakeholders and their interactions with Form Buster:

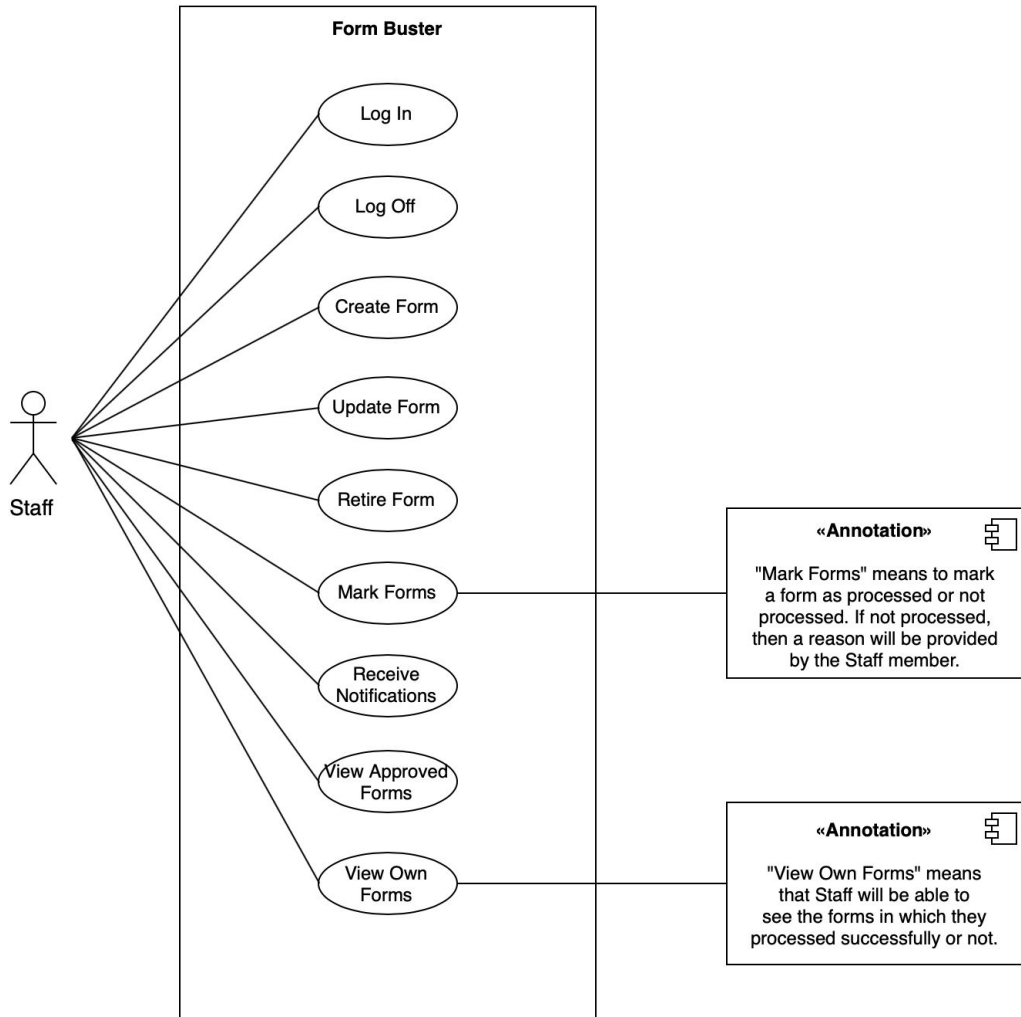
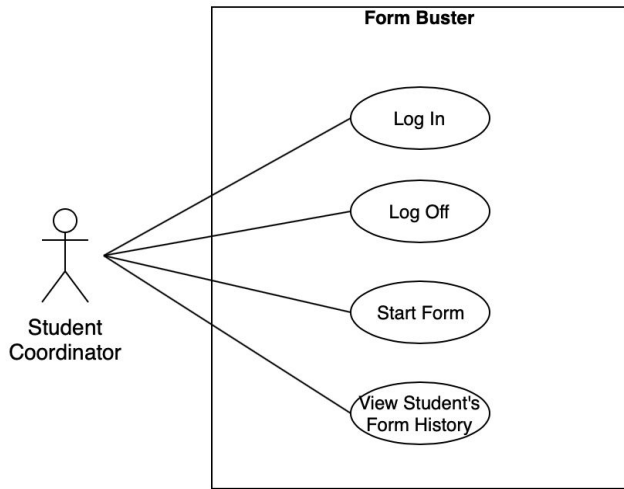


## 11. Use Cases









Use Case	Rationale	Actor
Login	A user should login in order to see their personal account and interact with other users.	Student, Faculty, Student Coordinator, Staff
Log Off	A user should log off in order for them to protect their account against other users that may share the same computer.	Student, Faculty, Student Coordinator, Staff
Start Form	Students will need to start a form for themselves in order to fulfill a task. Faculty members and student coordinators can assist the student by starting the form and sending it to the student for review or to complete it.	Student, Faculty, Student Coordinator
Save Form	Students may not be ready to submit the form for approval for many reasons, such as not having all of the information at the time of starting the form, or waiting on an event to happen.	Student
View Drafts	When a student saved the form for later, they may view the form to see if they would like to edit it.	Student
Edit Drafts	When a student saved the form for later, or was signed out for inactivity, the student can continue where they left off by editing the draft.	Student
Receive Notifications	<p>Students may be waiting impatiently for their forms to be approved and processed, this is useful to help the student know the status of the form. Notifications also help students know when a form has been created for them, so that they can start editing the form if needed, and to submit it for approval(s).</p> <p>Faculty and Staff may not remember to check the Form Buster website, so email notifications will allow them to promptly address a form.</p>	Student, Faculty, Staff
Track Form	Students may be waiting impatiently for their	Student

	forms to be approved and processed so this is useful to help the student know the status of the form.	
Submit Form	This will send off the form to the appropriate faculty members in the queue.	Student
View History	Student: own history Faculty can view forms that they've accepted/declined, can view student's form history to help advise students and verify registration. Student Coordinator can view student's form history to help advise and verify registration. Staff will view their department's processed or not able to be processed forms in order to look back at who processed the forms.	Student, Faculty, Student Coordinator, Staff
Generate PIN	A staff member will accept the student's excuse for a sooner processing date by generating a pin which the student can apply to the form.	Staff
Override priority	A student may have an acceptable excuse for why they will need the form to be processed by a sooner due date	Student
Create Form	A university office may come out with a new form they would like students to use.	Staff
Retire Form	A university office may choose to not use a form anymore.	Staff
Update Form	A university office may choose to modify the contents of a form; that would change the version of the form.	Staff
Submit Reason	Students will like to know why a faculty member declined their form, or why a staff member was not able to process their form.	Faculty, Staff
Approve Form	Used to know the tracking of the form. Faculty sign off on the forms or decline with a reason.	Faculty
View Forms	Used to let faculty know what forms are left	Faculty

to-be-approved	to be approved.	
View Forms to-be-processed	Used to let staff know what forms are left to be processed.	Staff
Delete Draft	A student may choose to delete a draft if they don't to submit anymore	Student
Change Faculty	A faculty member may take too long to approve a form in which is close to the deadline, thus a student may choose to change the faculty member who needs to approve their form.	Student
Mark Form as Processed	A staff member may mark a form processed after viewing and processing that form, so that a student knows it has been processed.	Staff

# Functional Requirements

## 12. General

### 12a. System

#GEN\_001 Form Buster shall redirect a user that wants to login, to an authentication service where they will be prompted for their TRACKS ID and TRACKS password; authenticated users will be redirected back to their dashboard on Form Buster.

#GEN\_002 Form Buster shall allow a user to log off of Form Buster.

#GEN\_002\_1 Form Buster shall logout a user after five minutes of inactivity.

### 12b. Starting a Form

#GEN\_003 Form Buster shall assign an appropriate due date for each form started.

#GEN\_004 Faculty members and student coordinators shall be able to start a new form for a student<sup>1</sup>, by typing the student id or name, and then picking a form from a list.

#GEN\_005 Form Buster shall not permit faculty members and student coordinators to submit forms on a student's behalf.

### 12c. Form Records

#GEN\_006 Form Buster shall allow faculty members, student coordinators, and staff members to access all students' form history, by either searching the student's id or the student's name.

### 12d. Notifications

#GEN\_007 Email notifications shall contain a specific link for that user, in which redirects the user to the form details on Form Buster's website.

## 13. Student

### 13a. Starting a Form

#STU\_001 A student shall be able to start a new form.

#STU\_002 A form that has been saved for later shall be found in the Drafts section.

#STU\_003 Form Buster shall allow a student to delete a form located in the Drafts section.

#STU\_004 Form Buster shall ask the student for confirmation, in the form of a pop-up, in order for them to submit forms.

#STU\_005 Form Buster shall automatically save changes made on a form.

#STU\_006 Form Buster shall show the student the due date for the form both in the "Start a form" page and when the student is submitting the form.

#STU\_007 Form Buster shall send a notification to a student when a form was started for them.

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<sup>1</sup> Starting a new form for a student implies either sending it to them blank or partially filled out.

#STU\_008 Form Buster shall allow students to save a form started by a faculty member or a student coordinator to their Drafts.

#STU\_009 Form Buster shall allow students to ignore a form that was started on their behalf.

#STU\_010 Form Buster shall allow a student to make a copy of and resubmit their form once a faculty member has declined it or a staff member was not able to process the form.

#STU\_011 Form Buster shall send the updated, previously declined or unprocessed, form to all faculty again, then staff, once the form was submitted by the student.

### 13b. Tracking a Form

#STU\_012 Form Buster shall allow the student to enter a staff generated, student unique, time sensitive pin to override the due date to a sooner date.

#STU\_013 Form Buster shall send a notification to a student each time a form receives a faculty approval.

#STU\_014 Form Buster shall send a notification to a student when the faculty member originally assigned to approve a form is unavailable.

#STU\_015 Form Buster shall send a notification to a student when a faculty member has declined to approve their form; the notification should contain the reason for declining.

#STU\_016 Form Buster shall send a notification to a student when their form has been processed by a staff member.

#STU\_017 Form Buster shall send a notification to a student when their form could not be processed by a staff member.

#STU\_018 Form Buster shall allow a student to change the original faculty member assigned to approve a form, upon notification of the unavailability of said faculty member.

### 13c. Retracting a Form

#STU\_019 Form Buster shall allow a student to retract their form only if the form has not reached the appropriate staff office for processing yet.

#STU\_020 Form Buster shall ask the student for confirmation, in the form of a pop-up, in order for them to retract forms.

### 13d. Dashboard

#STU\_021 Form Buster shall display in-progress forms on the student's dashboard, with the appropriate tracking information.

#STU\_022 Form Buster shall display a student's notifications on the right side of their dashboard, with the received date and the "Read" mark.

### 13e. Notifications

#STU\_024 Formbuster shall send notifications to students via email and within the website by default.

#STU\_025 Form Buster shall allow students to modify their notification preferences.

#STU\_026 Form Buster shall remove notifications that have been opened from the dashboard.

#STU\_027 Form Buster shall mark a student's notification as "Read" once it's been opened.

### 13f. Form Records

#STU\_028 Form Buster shall allow a student to access only their own form history.

#STU\_029 Form Buster shall add a form to the student's records upon processing of the form, or faculty denial.

## 14. Faculty

### 14a. Administration Tasks

#FAC\_001 Form Buster shall generate a unique, student specific, form specific pin, upon request from a faculty member, that enables a student to override their system determined due date; the pin would be time sensitive and thus valid for only 24 hours. The faculty in which requests the pin would be required to be the advisor of the student in which the faculty member is trying to generate the pin.

### 14b. Tracking a Form

#FAC\_003 Form Buster shall allow a faculty member to see who has already approved a form.

### 14c. Approving a Form

#FAC\_004 Form Buster shall allow a faculty member to approve or decline (with a reason) a form, after the form is opened by the faculty member.

#FAC\_005 Form Buster shall allow faculty members to approve or decline (with reason) a form only if it's listed as pending on their dashboard.

#FAC\_006 Form Buster shall ask the faculty for confirmation, in the form of a pop-up, in order for them to approve forms.

### 14d. Dashboard

#FAC\_007 Form Buster shall display pending forms in the dashboard, by deadline then by submission.

#FAC\_008 Form Buster shall display that a pending form hasn't been read by that faculty member.

#FAC\_009 Form Buster shall highlight forms that are due the same day that faculty member is viewing their dashboard.

#FAC\_010 Form Buster shall move reviewed forms (whether approved or declined) from the Dashboard to the faculty member's forms history.

#### **14e. Notifications**

#FAC\_011 Form Buster shall send email notifications to remind faculty members to approve a form based on the proximity of the deadline for the form.

#FAC\_012 A faculty member shall receive a notification to approve a form only when it's their turn to approve the form.

### **15. Student Coordinator**

#COO\_001 A student coordinator shall not receive any notifications.

### **16. Staff (Destination of the form)**

#### **16a. Administration Tasks**

#STA\_001 A staff member shall be able to create new forms.

#STA\_002 A staff member shall be able to revise current forms.

#STA\_003 A staff member shall be able to retire current forms.

#### **16b. Form Processing**

#STA\_004 Form Buster shall list the forms waiting for processing on the staff's dashboard.

#STA\_005 The staff member shall mark the form as either "processed" or "could not be processed".

#STA\_006 A staff member shall provide a reason if they mark a form as "could not be processed".

#STA\_007 Form Buster shall allow a staff member to access the history of all processed forms of every staff member.

#STA\_008 Form Buster shall move reviewed forms (marked as processed or not) from the Dashboard to the staff member's forms history.

#### **16c. Notifications**

#STA\_09 Form Buster shall send an email notification to the appropriate staff once there's a new approved form ready for processing.



## Non-Functional Requirements

### 17. Usability Requirements

#USA\_001 Form Buster's color scheme shall be uniform.

#USA\_002 Form Buster shall accommodate for color-blindness.

#USA\_003 Form Buster shall have an intuitive and user-friendly interface.

#USA\_004 Form Buster shall be scalable with regards to increases in data flow.

#USA\_005 Form Buster shall have the "unread" notifications to be displayed with a little dot on the left of the form entry.

### 18. Performance Requirements

#PER\_001 Form Buster shall be accessible from all modern web browsers.

#PER\_002 Form Buster shall have a 3 seconds maximum response time at all requests in Form Buster's website, not including the response time between the API and both the existing user authorization system and student information database.

#PER\_003 Form Buster shall easily interface, at a later date, with an existing user authorization system and student information database through an API.

### 19. Security Requirements

#SEC\_001 Form Buster shall not share student's information to third-party applications.

#SEC\_002 Form Buster shall ensure records are available only to users with appropriate authorization.