

## **Product Backlog**

Black Box

Version #3

## **Personas**

### **Professors**

#### Dr. Warble Garble

Age 50 - Female

- Speaks English and Chinese
- Intense Personality, tends to overreact to most problematic situations
- Worked at University of Toronto for 10 years in the Stats department as an Assistant Professor
- Passion for teaching and statistical consulting
- Worries about students learning, lecture quality and the quality of the resources used to teach
- Uses blackboard to post assignments and notes, and any other essential details like due dates
- Has been collecting data on students marks over the past few years
- Likes to post the students performance through the course to help them underline what topic/concepts they are struggling
- Cannot handle complex software, needs external help if required
- Likes to work with software that can be used intuitively
- Likes to create assignments by hand, and then scan them to upload them online
- Skilled at analyzing data and teaching without software
- Likes creating new and creative ways to teach students
- Likes to provide feedback to students about their accomplishments or mistakes
- Tends to create multiple sets of problems to increase individual effort put into problems by students
- Frequently holds office hours after lectures, or some time in afternoons

#### Dr. Chizzywick D'Croeinstein

Age 36 – Male

- Proficient in programming, and using complex software
- Assistant Professor in Mathematics and Statistics
- Has previously worked at IBM as a System Analyst
- Prefers using keyboard shortcuts to perform tasks
- Likes to have a group forum for classes so they can set up an interactive chat for collaborating
- Likes to monitor students' performance to check how well he is teaching the course
- Likes to post assignments and solutions on BlackBoard
- Likes to use complex software that provides more features and benefits
- Likes to create assignments on the computer by using detailed text editor software called latex
- Likes to post notes online to ensure students that have missed class can catch up
- Likes to monitor the forum and actively checks the post for questions and concerns
- Uses various technologies such as Latex, Piazza, Git, class website, and Gradenywork

## **Students**

### Alex Mai

Age 18 – Male

- Likes to use online resources (Wikipedia, YouTube, and Google)
- Student majoring in computer science, minoring in stats and in humanities
- Likes to study right after lectures, and work on assignments immediately
- Worries about if his assignments have mistakes in them
- Prefers working in groups when study
- Skilled at programming in Assembly and Turing
- Very dependent on questions to help himself with understanding the concepts
- Likes to go to office hours one in a while for questions because professors take too long to respond via email
- Likes to study questions that are similar to previous exams
- Likes to be anonymous on class forms like piazza (and is able to use LaTeX)
- Likes immediate responses and feedback from professors
- Checks notifications constantly, uses apps like blackboard/google classroom to stay updated on class work
- Prefers convenience when working or studying for a class
  - Likes typing notes, dislikes writing notes by hand
  - To be able to work and study without the need of carrying a lot of books

### Pompous Perry

Age 30 - Male

- Uses the new MacBook pro and has proficiency with Final cut pro
- Likes to remain within the apple ecosystem so that everything can be synced
- Majoring In computer science, with a minor in Visual Arts
- Avidly responds to piazza posts
- Dependent on online resources and uses R to do statistical analysis
- Uses Khan Academy to learn course material instead of going to every lecture
- Likes to do warm-up/sample questions before lectures or before starting assignments
- Uses facebook group chat to communicate with classmates and share notes
- Contacts the professor for a lot for clarification on lecture material
- Constantly checks grades
- Prefers receiving feedback from professor as soon as possible
- Likes to print out lecture notes and assignments so that he can add his own additions to them
- Skilled at note taking, staying organized and staying up to date on tasks

Pablo Escobar

Age 25 – Male

- Terrible at speaking/writing English but proficient at speaking and writing Spanish
- Likes to work offline so that he can work while he is on the bus
- Prefers to write everything by hand because he likes keeping physical copies of everything in his binder
- Wants to have everything graded with feedback immediately if possible
- Bad with technology but he can use straightforward applications as long as they have a useful purpose
- Likes to do questions repeatedly until he has an understanding of the concepts needed to solve them
- Prefers to work in isolation with a bare minimum of internet connection to avoid distraction
- Relies on notes taken in class instead of online resources
- Majoring in International Development with a minor in management
- Not a good researcher as he never liked using online search engines to find information
- Hates inaccurate information so he does not use much online resources that are not credited
- Websites that he uses on daily basis consist of Blackboard and Piazza

**User Stories**

- 1) As a Prof, I would like to login to WebWork so that I can access all the tools necessary
  - Tasks:
  - Create Login Interface so that the prof can login to the application (~2 Points)
  - Create Database to store the Prof info and all the info of the students (~3 Points)
  - Set up a way to prompt when the login info is wrong (~1 Point)
  - Description: Allow the prof to login to the app and display all the functions that the prof can access once inside the Prof terminal, if he/she enters wrong login credentials, notify them in a clear way.
- 2) As a Prof, I would like to add students to WebWork so that they can participate.
  - Tasks:
  - Create a page for inputting information for the students (~2 Points)
  - Create a button to upload the inputted information to the database. (~1 Points)
  - Dependencies: Database (User story 1, Task 2)
  - Description: Give a prof functionality to add students into the list of students currently participating in the Webwork assignments (with a specific user ID followed by their student number as password)

- 3) As a Prof, I like to upload some course notes so the students can remain on top of their work
- Tasks:
  - Upload button to add file from computer (~2 Points)
  - Display files that have been added in the U.I (~4 Points)
  - Dependencies: Database (User story 1, Task 2)
  - Description: Create a page where students can view the lecture slides in a clear manner. (Optional: allow them to download the notes)
- 4) As a Prof, I would like to be able to post announcements and pin reminder when needed.
- Tasks:
  - Create a field to input announcement info and add it to a list of announcements, with the option of making it visible to prof and all the students. (~3 Points)
  - Create a function to update the board. (~2 Points)
  - Dependencies: Database (User story 1, Task 2)
  - Description: A homepage screen where students can view what has been posted along with previous announcements and pinned reminders
- 5) As a Prof, I would like to create and edit problem sets.
- Create an upload problem set button that will show file system to upload a file (~1 story point)
  - Have a download file system to be able to download the file (~1 story point)
  - Enable/ disable visibility of file when changes need to be made until adjusted. (~3 story points)
  - Creating a problem set using latex (~3 story points)
  - Editing the problem sets (~3 story points)
  - Description: Create a page where problems can be entered using LaTeX formatting, and then upload save those problems. Desktop Java external libraries need to be remodeled
- 6) As a student, I would like to view all the announcements posted by the prof.
- Create a page to access all the current announcements (1 Points)
  - Make all the announcements for that specific logged in student show up on the page (2 Points)
  - Dependencies: User story 4, Task 2
  - Description: Create a page where professors can post announcements for students to receive

- 7) As a Prof, I would like to see performance distribution of the class so I can adjust the level of difficulty accordingly.
  - Add student marks to database (~2 story points)
  - List Names and Marks of students (~ 3 story points)
  - Create UI for listing names and marks (~1 story point)
  - Dependencies: Database (User Story 1, Task 2)
  - Description: Create a page where a general overview of all the student's performance can be viewed
- 8) As a student, I would like to download a hard copy of the problem sets so that I can work offline.
  - List the available problem set (~1 Story Point)
  - Create a button on screen for downloading (~1 Story Point)
  - Download the selected available problem set (~1 Story Point)
  - Description: Create a page where all the problem sets can be viewed and downloaded
- 9) As a student, I would like to receive individualized versions of problems so that I can learn how to solve variations of problems of a similar type.
  - Create a page to get the input regarding which problem set the student wants to view. (~1 Story Point)
  - Retrieve every problem related to the selected problem set from the online database of problems (~3 Story Point)
  - Shuffle the problems retrieved and allow the student to view only 5 problems per problem set, which would allow each student to receive individualized problem sets. (~3 points)
- 10) As a Prof, I would like to give students their performance information.
  - Display only the students that have marks. (~1 Story point)

## **Justification Change In Product Backlog**

The product backlog was changed when during the sprint 3 and 4. As a group, all developers agreed to remove some of the user stories due to the time limit. Since there was not enough time to implement every feature that was originally in the product backlog, all developers decided to leave out some time-consuming but less important user stories. In the way, the software could be completed on time and delivered to the client, with most of the features implemented.

## Remaining user stories

As a student, I would like to see some sample questions to get familiar with the topics that will be tested on

As a student, I like to have a practice section along side with the assigned questions to do some warm up.

As a student, I like to have a live chat session with the prof as I will be able to talk to the prof for help when I can't attend their office hours physically.

As a student, I would like to be able to finalize my answers before submitting.

As a student, I would like to make infinite trials until the homework due date.

As a student, I would like to submit my answers to receive the immediate feedback

As a student, I would like my work to be automatically graded.

As a student, I would like to view feedback from the prof so that I can know how I should go about improving my knowledge of the course material.

As a student, I like to have a live chat session with the class as we can help each other with understanding concepts.

As a student, I like to study in a group where I can upload my notes to the group and ask where I did wrong on the question.

As a student, I like to do have a place to share each other notes to help each other out with the topic/concept with the class.

As a student, I like to receive some notification to remind me about what needs to be completed for online evaluation.

As a Prof, I would like to Hide/Unhide problem sets from students and TA's

As a student, I like to see my current grade in this course.

As a student, I would like to print the assignment so that I can physically work on it.

YZ

As a Prof, I would like to see the average assignment scores of all students so that I can decide whether or not the work I give out needs to be adjusted to be harder or easier.

As a Prof, I would like to create and edit problem sets.

👁 1 3/5

HC

As a Prof, I would like to provide students with individualized versions of problems so that the students learn the process of solving a problem and they don't just memorize one specific problem.