

## Requirements Elicitation Process

The requirement elicitation process involved surveying and conducting research on other whistleblowing applications. The team collectively gathered individuals to survey for user stories and suggestions. Along with this, we set out to find information on other already existing applications that deal with whistleblowing to see what works well and other stakeholder suggestions that already exist.

For the survey, we decided to use this as one of the ways to elicit requirements because the method is relatively simple to implement and doesn't take up a lot of the survey participant's time. Given the amount of time we had to gather requirements, this method made sense to use and was effective. Through this questionnaire our team could reach a vast demographic in a short amount of time and allow respondents to freely share their answers when they had the time. While our questionnaire proved useful, there were faults in the sense that we could not easily follow up on answers and all the questions were the same for everyone so information we may have been looking for may have been omitted because the questions present the problem in a particular way. Our survey was made in Google Forms consisting of 5 questions which received 11 responses from various people who work or have worked at technology companies. The content and purpose of each question can be found in Table 1 below.

*Table 1: Survey Questions and Purpose*

Question	Reasoning
Age category	We wanted to get a range of responses from people who had varying experience in the tech field so seeing the age ranges that have responded would provide insight into this.
Have you ever experienced misconduct within your company or previous company?	Inquires as to whether or not people have experienced misconduct in a company and sets precedent for the next set of questions. Groups respondents to "yes" or "no" as a result.
If "Yes", did you report it? What kind of misconduct was it? What did you like/dislike about reporting misconduct within your company?  If "No", why didn't you?	This set of questions were included to assess the general consensus of employees who experience misconduct and to see whether or not the type of misconduct played a role in reporting. Additionally, we wanted our participants' opinions on what other reporting systems did right and wrong.
If you witness misconduct in the future, would you report it? Why or why not?	This question was to engage both those who have and have not experienced misconduct. We also want to know whether they would report in a future situation and if there are any elements we can parse from their reasoning that could go into our application.
How would you improve the system of reporting misconduct within your company?	A more direct question to elicit requirements from our participants in case any of the previous questions didn't allow for what individuals wanted to say. Also since company reporting services are all different we can find similarities amongst requirements or unique suggestions that would make whistleblowing easier and less risky.

As far as researching, we set out to explore various existing whistleblowing applications with the intention to parse requirements in various ways. The primary way we intended to research was by finding existing whistleblowing applications and noting features and aspects of the application that not only stood out, but seemed useful and plausible for our application. In addition to this, another way we planned was to find and read individuals' thoughts about whistleblowing, the process, and reviews they had on any whistleblowing applications they used. This way we could see what our competitors were doing right and what wasn't working, so we could know what we might add as a requirement and what may be best to avoid. While we did not create specific prompts for searching, generally we planned on looking for whistleblowing application requirements and consumer reviews whether that be on company sites or public forums. The idea with public forums is that if we could not find much through official pages and reviews, there could be useful information from online forms. Since the project centers around whistleblowing and that involves sharing information with others, we concluded it could possibly be beneficial to look where individuals often share their opinion.

## Requirements Elicitation Results

From the combination of elicitation techniques of both using a questionnaire and conducting external research, we were able to amass a significant amount of requirements for our Tech Company whistleblowing application. The survey received 11 responses and our research produced multiple sources with potential requirements and user stories. Results from both techniques are summarized below.

In the survey, with the 5 questions discussed in the previous section, their responses<sup>1</sup> are as follows:

For question 1, our age demographic varied slightly with about 82% of respondents being between the age of 18-20. For the other 18%, roughly 9% were between 21-29 years of age and the other 9% was between 30-39. Given the time constraint and nature of our project, having the majority of our participants end up between 18-20 was not unexpected. Even still we did have some variety which we may prove beneficial in later questions with varying experience and perspective.

For question 2, the majority of our participants, ~73%, never experienced misconduct in any company they have worked for. However, the other 27% of participants have experienced some type of misconduct within their workplace. Since some of our participants have experienced misconduct we will have some idea of what they're reporting process was or wasn't and why that could be in order to gather requirements. Likewise, with those who haven't experienced misconduct, we can understand why they've never experienced misconduct and what ideas they can bring to our whistleblowing app.

For the set of questions under question 3, when asked how the reporting process went for those who experienced misconduct. Whether or not the person reported the misconduct was 50/50 across the small minority who experienced misconduct. For those who did, they dealt with racism or inappropriate workplace relationships and from their reporting had no retaliation. For those who did not report the misconduct, their other coworker already did it before them or were afraid of repercussions of doing so. Though some had good outcomes, a somewhat apparent theme amongst these is the idea of retaliation even amongst those in which the report went well, some situations that are reported make the person who reported it obvious even if anonymous since it's through the company. The individuals who did not experience misconduct were mostly unanimous on why they didn't experience misconduct since their company had proper guidelines and good employees who conduct themselves properly. That being said, there was one who didn't experience misconduct themselves but their coworker did in which said employee reported the incident themselves since the participant felt it wasn't their place to get involved. For the majority of our respondents to not experience misconduct is a beneficial thing for the state of the workplace today though for the sake of our project, one thing we can derive from this group's responses would be that there could be multiple people who experience the same misconduct or event. With that in mind, maybe an ability to upvote whistleblowing reports and/or have other employees comment on whistleblowing statements if they've experienced the same or similar events within a company.

For question 4, most of our participants considered it important to report any misconduct they see in the future because it holds the company accountable, employees to feel safe, and work to flow efficiently. However, there were also those who were on the fence about reporting future misconduct. It was either because they may not feel safe given the situation or simply because the situation of misconduct may not be impactful enough on the workplace's environment for them to justify the hassle and report it. Some key takeaways that can be derived from this question is that anonymity is an important factor for many people who experience misconduct as there is a fear of retaliation from their company.

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<sup>1</sup>  B-11 Survey Charts and Results

Additionally, it seems a sense of security and benefit from inviting individuals to report the misconduct must be given as from the responses, sometimes some misconduct is overlooked since dealing with it would be too much of a hassle.

For question 5, we asked what respondents would suggest to improve their company's system of report and we received a variety of useful responses. With this question in particular, we could parse very straightforward requirements for our whistleblowing app straight from their response. To sum up there suggestions here are the main suggestions:

- A simple and straightforward UI and instructions so people are more likely to report things.
- Make sure companies are held accountable for handling reports.
- Make people feel safe and open to talk about reporting misconduct.
- Inform users about non-retaliation policies by giving links to a company's report policies, whistleblowing federal laws, etc.
- Digitized information on how to report for their specific company in addition to our whistleblowing app.
- Make fellow employees aware of misconduct, especially if misconduct is from higher ups.
- A less demanding system for the person who reports the misconduct.
- Confidentiality from reporter to problematic party or company.

Though the process of a questionnaire did not allow us to follow-up with participants, the results provided useful perspectives that can be used for us to parse requirements.

As for the results of our research, we've found multiple whistleblowing softwares and user reviews that provide insight as to elements that we should consider for our whistleblowing application. The first app we found was the Legality Whistleblowing App<sup>2</sup> which allows companies to have a whistleblowing database within their company for their employees to use. Aspects of their software that stuck out were that they had exclusive areas of the application for organizations within a company, the app had multilingual functionalities, users could report using their voice, a secure login system, and allowed for push notifications. Another app that we found during our research was HRACUITY<sup>3</sup> which was marketed as a HR software that can be used for companies. Features that the software markets as useful is that users can report anonymously, there is a messaging capability for employees to communicate on reports, and there is status tracking of a person's report. The last of the softwares we viewed was FaceUp<sup>4</sup> which was very similar in purpose to the previously mentioned applications. FaceUp offered a detailed and extensive list of its features on its website allowing us to gain a great understanding as to what users may be interested in when it comes to whistleblowing. Similar to the previous apps, this software allowed for communication with the whistleblower, organizing reports by organization, and a type of notification system which for FaceUp was through email. Furthermore, the software offers the ability to track all actions with an activity log and the ability to redact reports to protect user information.

As far as what we could parse from user reviews<sup>5</sup> of these and similar apps, individuals appreciated how the app stayed within the law and regulations around whistleblowing, allowed and kept users' anonymity, was highly usable with simple and straightforward instructions, and offered support for usage of the software.

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<sup>2</sup> <https://www.digitalpa.net/whistleblowing-software-mobile-app/>

<sup>3</sup> <https://www.hracity.com/>

<sup>4</sup> <https://www.faceup.com/en/whistleblowing-features>

<sup>5</sup> <https://www.g2.com/products/whistleblower-software/reviews>

From the survey results and research that were previously discussed in this section we were able to create user stories that would represent our requirements. These user stories can be seen below in Table 2.

*Table 2: User stories*

As a/an	I want...	In order to...
user	To see other users' whistleblowing reports and upvote them	See misconduct that occurs within the company and share similar misconduct I've experienced
user	To feel safe reporting misconduct	Be willing to report the misconduct I've experienced and feel open to discuss it with others
user	Information on how to report to my particular company	Insure that proper action is taken towards the misconduct
user	Information about non-retaliation policies and federal laws involved with whistleblowing	Know my rights and risks when reporting on this application
user	Public reports	Inform fellow employees about misconduct within the company
Admin or user	Redact user information or portions of a report	Protect the user's identity and/or job for whistleblowing
user	Multilingual support	Use the application in a language I'm more fluent in
user	To be able to upload a recording of my voice to the application	Report misconduct in a easier, faster manner
admin	Activity log	Manage user actions within the application and ensure proper usage and user safety
user	Notifications from the application	So I can know when other users comment on my report