1 Survey Methodology

1.1 Survey Design

Our survey consists of questions regarding participants' familiarity and experience with security compliance standards and certification for IoT products and their opinions on specific scenarios relevant to IoT product compliance. The survey consisted of a mix of Likert-based, multiple-choice, and open-ended questions. Before releasing the survey to our participants, we piloted our survey with four graduate students and one security expert and made revisions based on their feedback. Our survey is organized as follows:

- **Demographic Information:** This section asked participants to provide their demographic information, particularly age, gender, education, and country.

- **Background Information:** This section asked questions related to participants' professional backgrounds, such as job status, job title, and years of experience they have. Further, we also asked the participants employed in any organization about the organization's size and headquarters.

- **Familiarity with IoT Compliance Standards and certification:** This section asked participants what type of IoT products they were working on, how knowledgeable they were about IoT product security, and if they were familiar with IoT Specific Security Compliance Standards.

- **Experience with Certification and IoT Products** This section asked about participants' perceptions and experience with IoT products and compliance standards. More specifically, we asked participants if they have working experience with any IoT-related projects related to ensuring compliance and certification, how their organization chooses particular compliance standards and their certification process. Moreover, we also asked participants for their perspectives on whether certification influences product security and product release deadlines. Finally, participants were asked to provide their opinions about the entities they think are responsible for the correct enforcement of IoT compliance standards and who they hold liable for the failures in the certified product.

- **Challenges and Expectations** This section asked participants whether they have experienced any challenges while ensuring compliance standards of IoT products and what improvements they expect in the certification process.

1.2 Participant Recruitment

For recruiting participants, we posted fliers on various developer forums (e.g., SmartThings community [9], Google Nest community [10], OpenHab community [11], and the Home Assistant community [12]), LinkedIn, and Twitter. Further, we recruited four participants from a freelancing platform, Upwork. We received a total of 685 responses. To ensure the quality of the survey responses, we discarded 609 responses due to (i) incomplete responses, (ii) ambiguous responses, (iii) duplicate responses, and (iv) multiple failed attention check questions. Finally, we obtained 76 valid responses.

1.3 Ethical considerations

The survey protocol was approved by our Institutional Review Boards (IRB). Participants were informed about the study's goal before participating in the survey. Our consent form explicitly mentioned that participants willingly provided consent to disclose anonymized data by participating in our study. Our consent form also stated that participants could provide their email address for entering a drawing for a $50 Amazon gift card compensation upon completing this user study, and we will randomly choose one respondent per 20 complete responses. After completing the study, we randomly chose 4 participants who received $50 Amazon gift cards.