Software Engineering

In Class Exercise I

Group: Joel Malerba, Zach Burstain, Matt Furtney, Paul Miller & Samir Mathew.

People suffering from debilitating health issues may have trouble reaching their toes which can be problematic if they want to tie their shoes. To defeat this conundrum we have devised a model of shoe that laces itself. This product is highly scalable and can appeal to individuals who would rather not have to lace their shoes. An elderly person who is unable to reach down to tie his footwear purchases our product. The man slips his foot into the shoe and says “Hurricanes” and the shoes self laces and he sets off on a walk. Upon returning, he simply reaches out for his phone and using the proprietary app will loosen the laces and he slips his feet out of the shoes. As the product will be used almost daily, it must continue to function in all weather conditions including but not limited heavy rainfall, snow or heat caused by sunlight. General wear and tear or other substances such as mud should not affect the electronics or lacing mechanism. To achieve success with the desired demographic, the laces should activate or deactivate without physical contact from the user. Therefore remote access shall be achieved by a proprietary phone app or a unique voice activated password. Furthermore the battery in the product should be able to recharge itself from use. And to conserve its charge, the shoe will remain off until it senses a weight placed in the heel partition of the produce. At the time of purchase, the user should calibrate the level of “tightness” desired from the laces to ensure a comfortable fit. In case of mechanism failure or emergency, a manual toggle at the rear of the product shall disengage the mechanism. The shoe design is to be completed within twelve months and the prototype available to for testing will be ready six months later. We are prepared to offer a market ready product twenty-four months from now. We plan to utilize pre-existing shoe designs by partnering with market leaders in the footwear industry. By leveraging the firm’s extensive footwear library and history we can offer a diverse array of products that appeal to each user’s taste.